



**Hanford 2012:**

***Accelerating Cleanup and  
Shrinking the Site***

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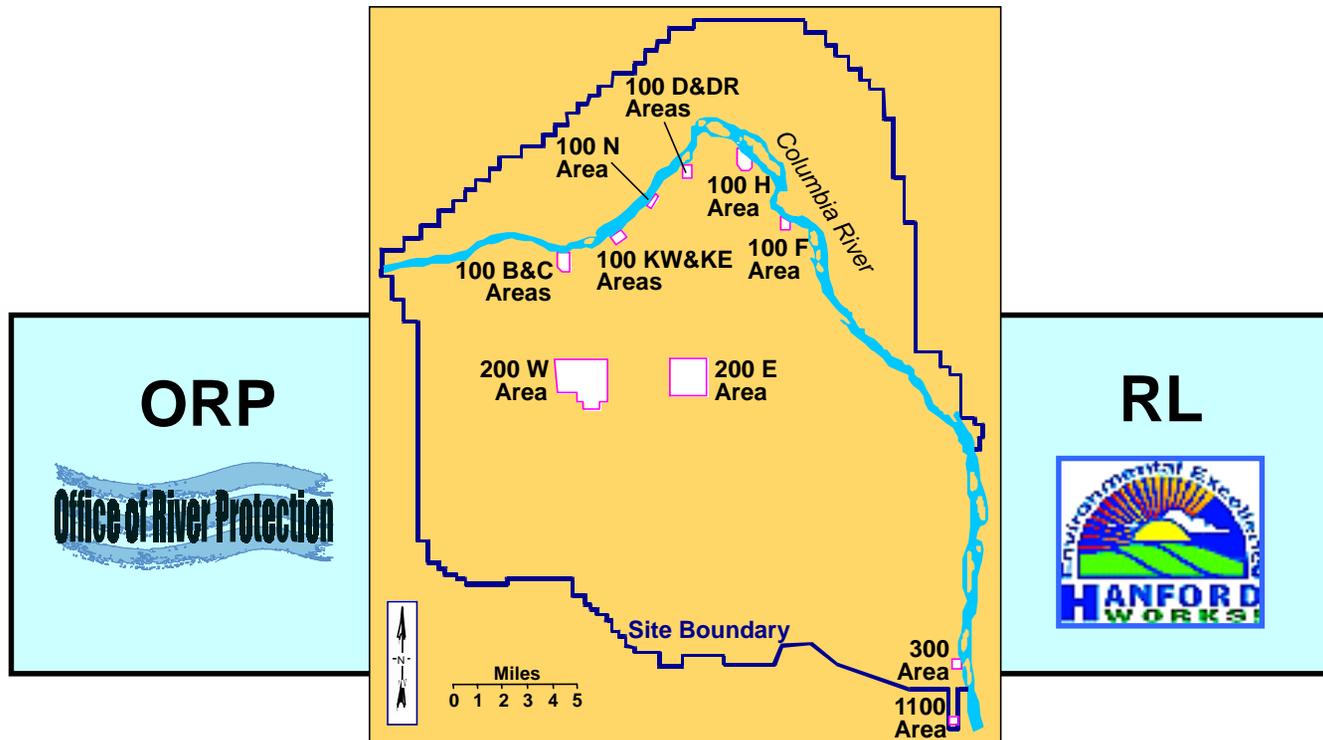
***Keith A. Klein***

**U.S. Department of Energy  
Richland Operations Office**





# Two DOE Offices - One Hanford Site



**Working together for Hanford success, efficiency, and alignment:**

- Shared administrative functions
- Site services (security, fire, power, shops)
- Groundwater/vadose zone
- Future site use planning

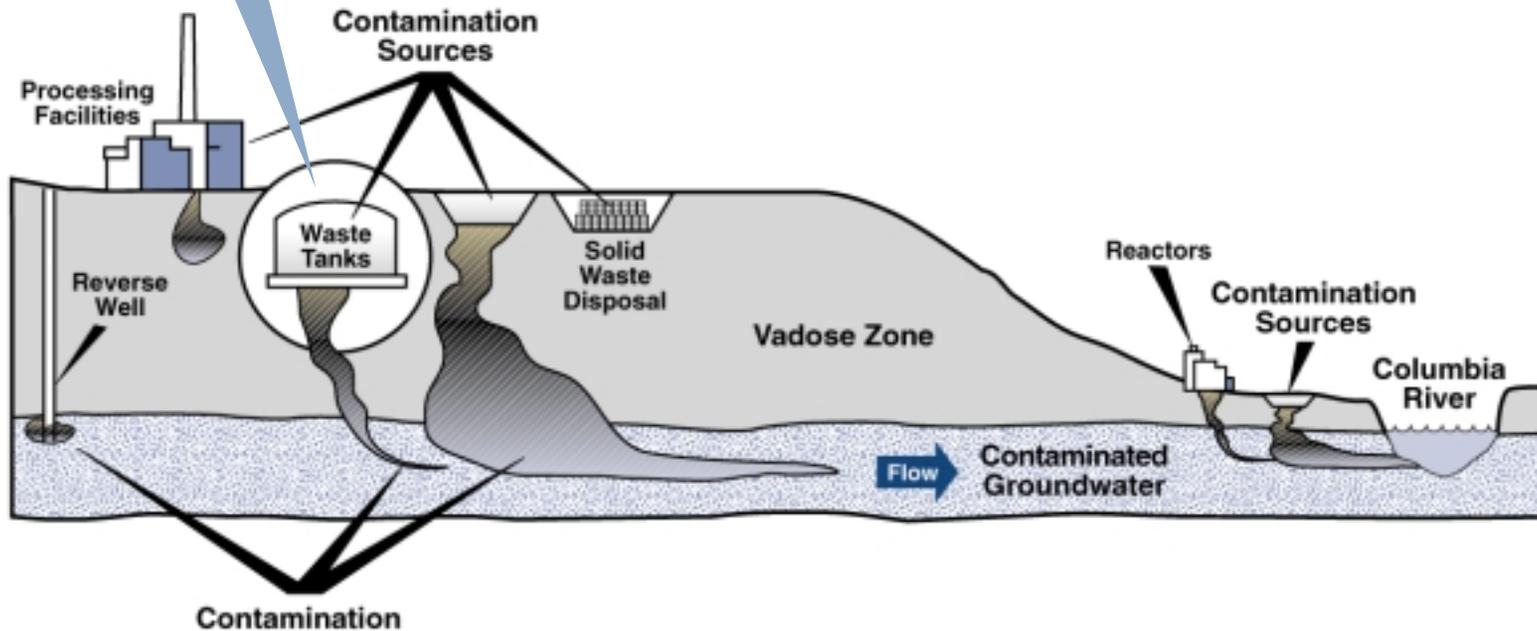


***Office of River Protection***

Tank Waste Remediation

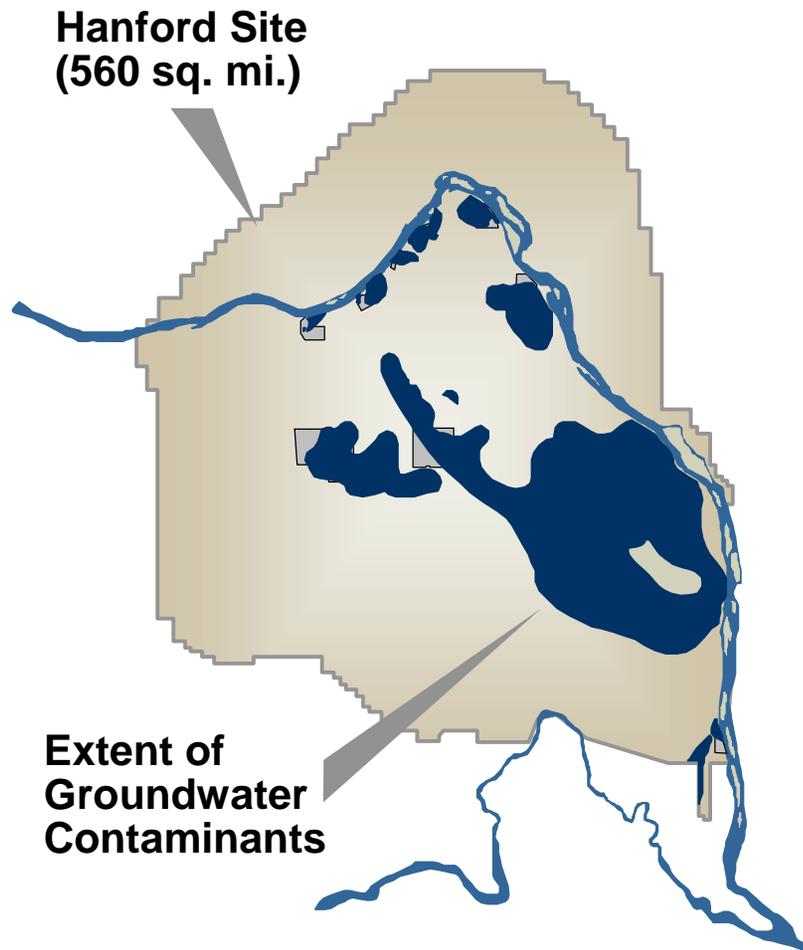
***Richland Operations Office***

Hanford Site Cleanup





## The Legacy



## Richland Operations Office

- 2,100 metric tons of deteriorating nuclear fuel
- 1,500 identified waste sites
- 450 billion gallons of liquid waste discharged to the environment
- 4 metric tons of plutonium
- 200 square miles of contaminated groundwater (over 1 trillion gallons)
- 5 million cubic yards of contaminated soil
- 5 canyon facilities
- 9 reactors

## Office of River Protection

- 177 underground tanks containing over 53 million gallons of high level waste

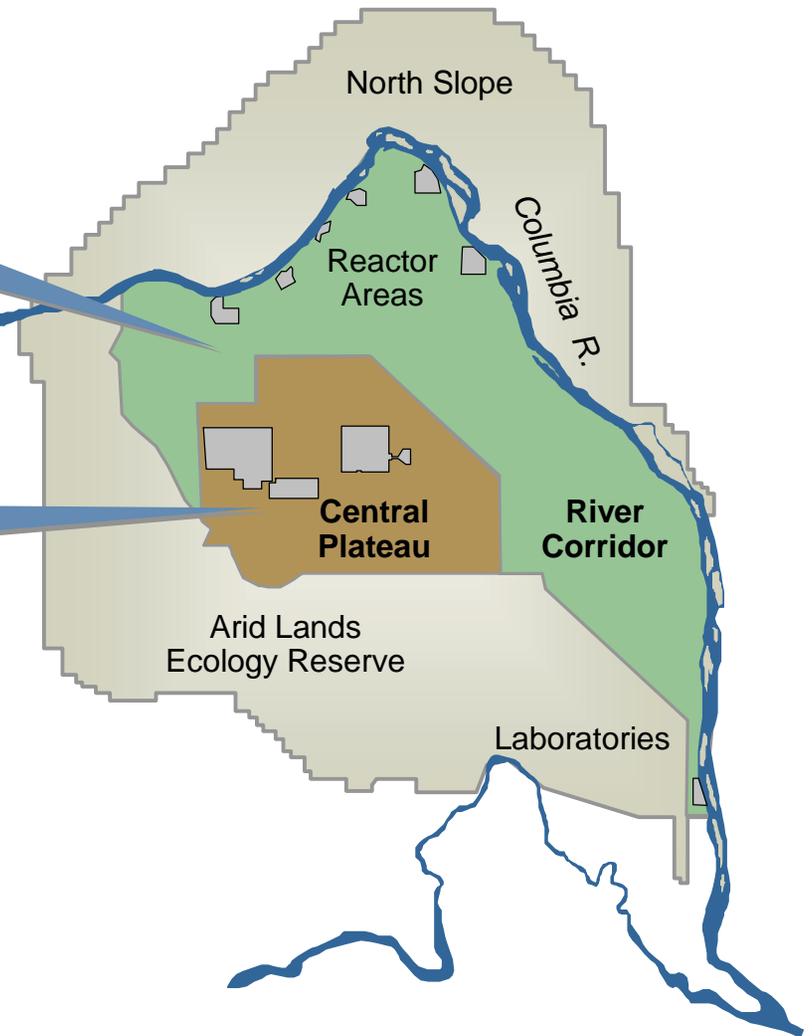


# Hanford 2012: Accelerating Cleanup and Shrinking the Site

***Restore the River Corridor***

***Transition the Central Plateau***

***Prepare for the Future***





# Acceleration Benefits

- **Reduces Risks**
- **Saves Time**
- **Saves Money**
- **Addresses the Compliance Gap**



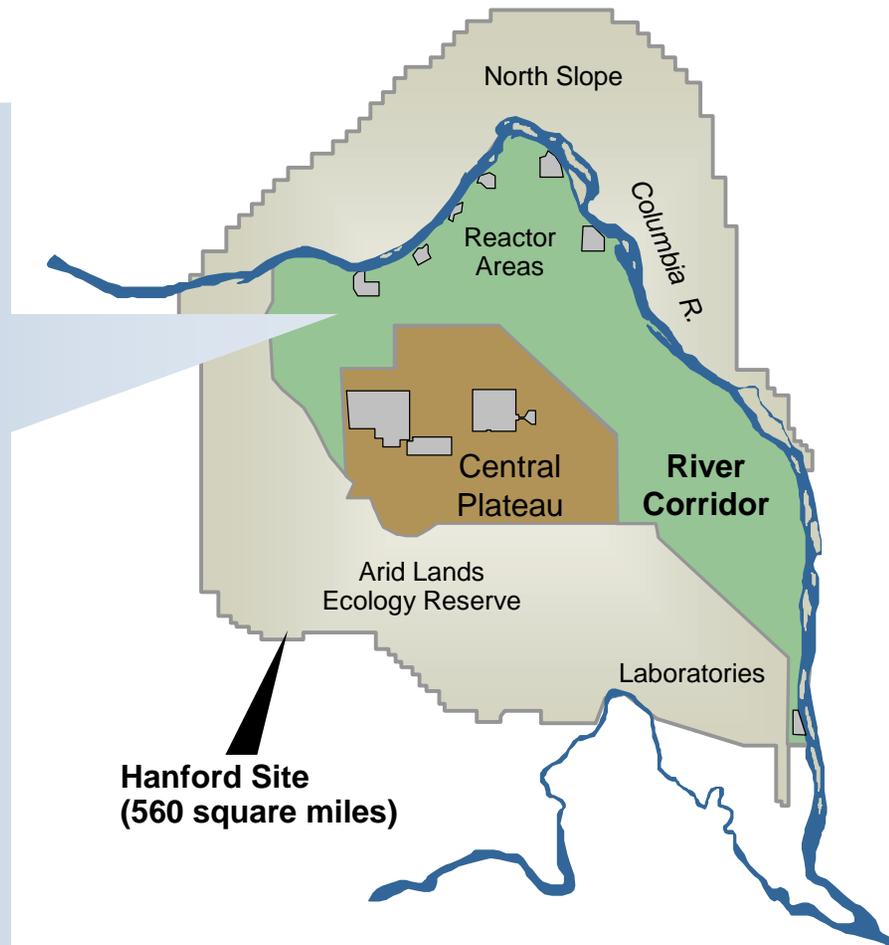
# The River Corridor

## Reduces Risks

- ✓ Gets spent nuclear fuel out of the K Basins on schedule
- ✓ Moves about 56 million curies of radioactivity from the River Corridor into safe storage or disposal
- ✓ Completes 761 waste sites
- ✓ Places 8 production reactors in interim safe storage
- ✓ Completes decontamination and decommissioning of about 320 facilities
- ✓ Shrinks active Hanford operations to about 75 square miles

## Saves Time / Money

- ✓ Accelerates cleanup of portions of the 300 Area by more than 30 years



***Essentially completes  
River Corridor  
cleanup by 2012***



# Maintaining the Momentum



Moving Spent Nuclear Fuel



Soil Remediation



Reactor  
Interim  
Safe  
Storage

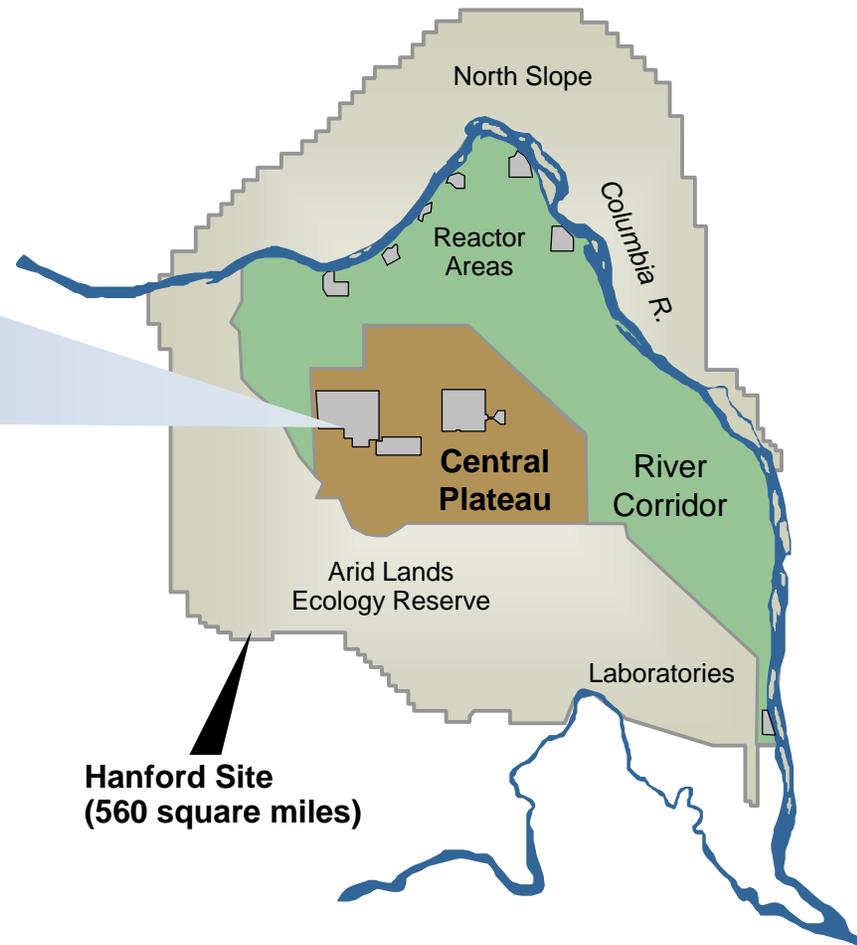
*... in the  
River Corridor*



# The Central Plateau

## Reduces Risks

- ✓ Completes plutonium stabilization in FY04
- ✓ Sends transuranic waste to the Waste Isolation Pilot Plant in New Mexico
- ✓ Retrieves all contact-handled transuranic waste from burial grounds
- ✓ Modernizes, stabilizes, and operates waste management facilities
- ✓ Treats mixed waste
- ✓ Completes characterization of non-tank farm waste sites
- ✓ Implements strategies to protect groundwater
- ✓ Treats liquid from high level waste tanks
- ✓ Supports the Office of River Protection's waste treatment project



**Addresses urgent cleanup challenges on the Central Plateau**



# Maintaining the Momentum



TRU Waste Retrieval



ERDF Operations

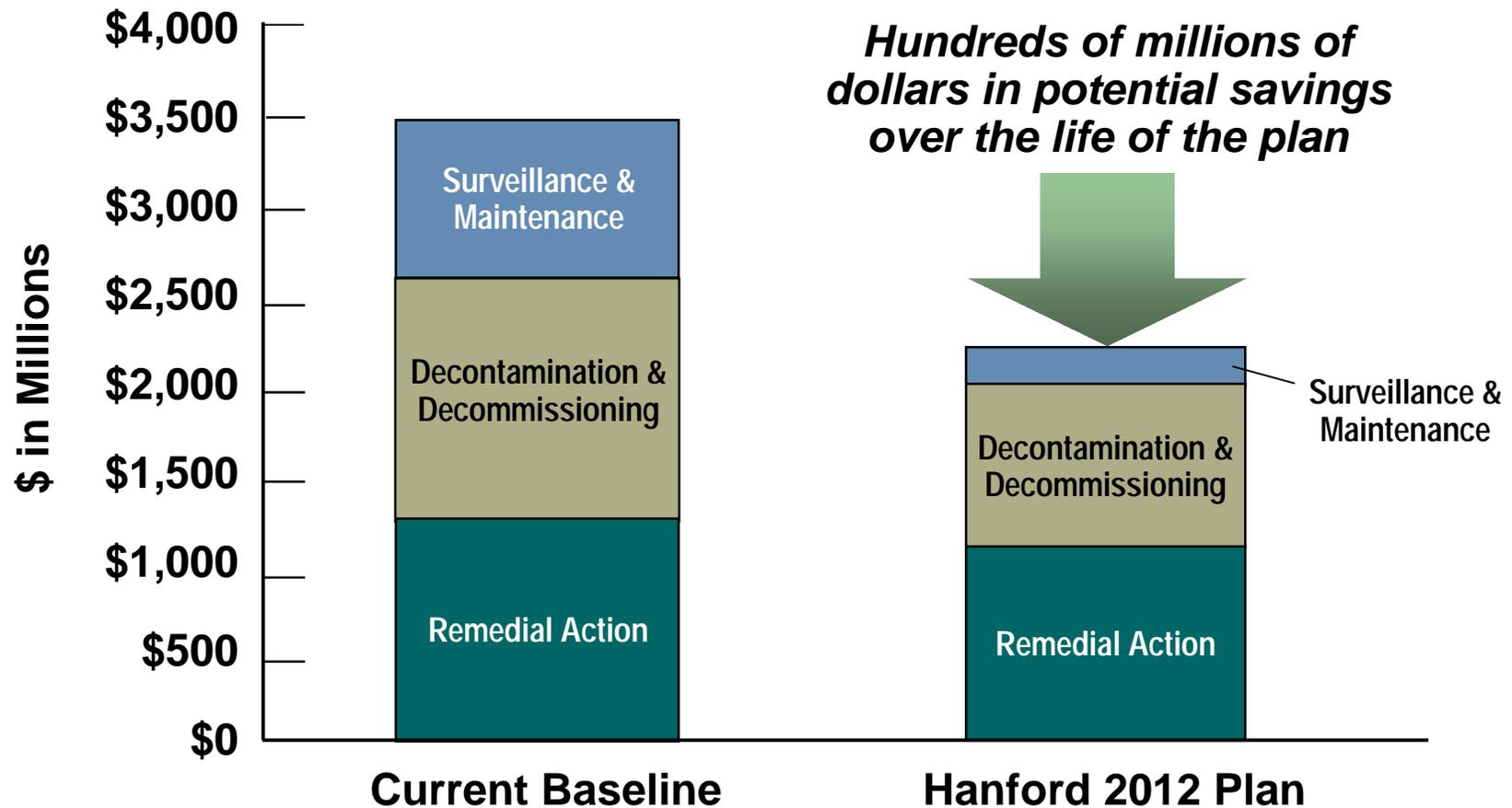


Plutonium Stabilization

*... on the  
Central Plateau*

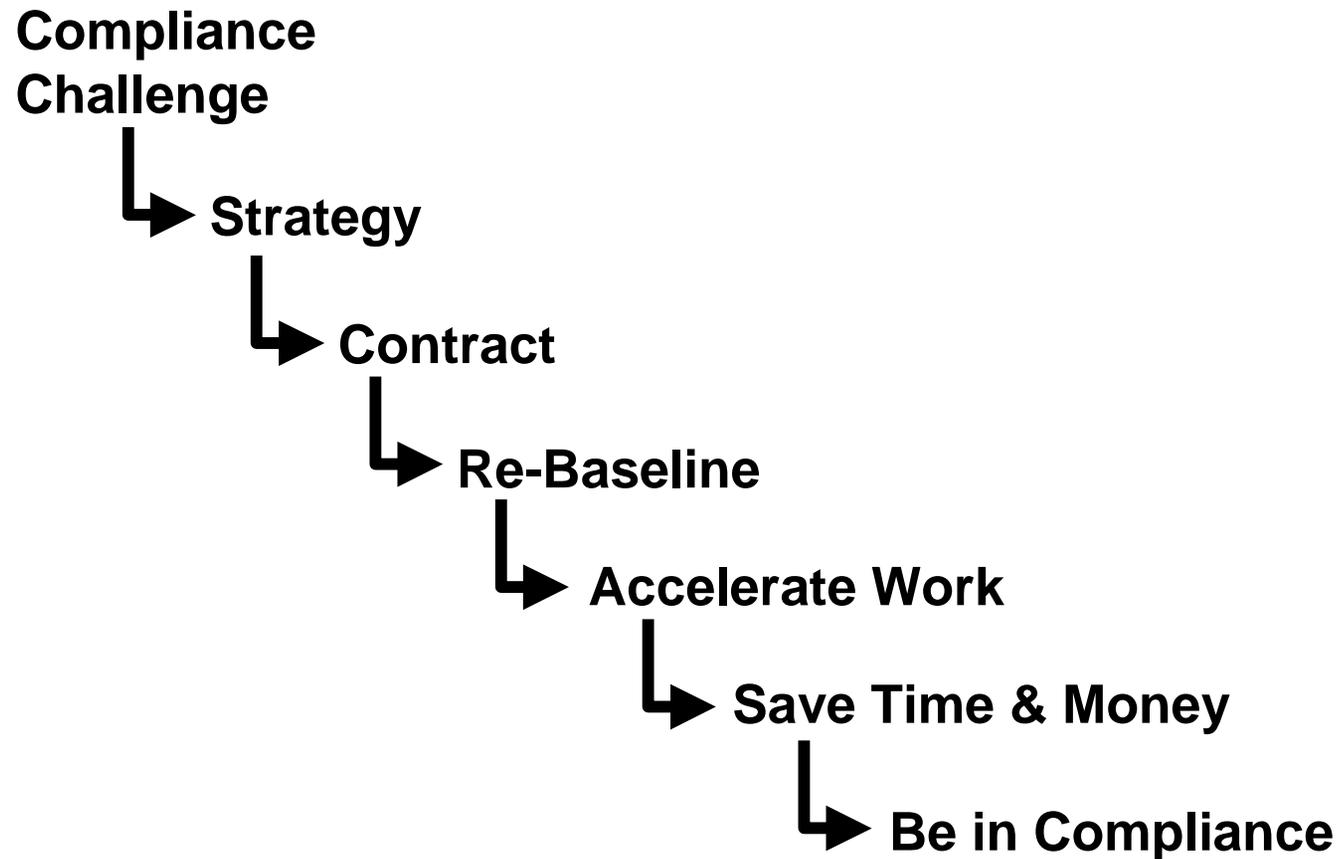


# Acceleration Saves Money





# The Compliance Situation





## Efficient and Accountable Contracting

### Fluor Hanford, Inc. Contract Extension

- High priority activities completed by 2006 (Spent fuel and plutonium)
- Incentivized to complete more cleanup for less money

*...Result: \$3.6 billion in cleanup scope for \$3.2 billion*

### River Corridor “Closure Contract” being Formulated

- Emphasis on better sequencing of work, schedule accelerations, cost savings, and completion

*...Result: An essentially cleaned up  
Columbia River Corridor by 2012*



# FY 2000 Commitments\*



Exceeded	Met	Did Not Meet	
	✓		<b>Complete, install, and test all systems needed to begin moving spent fuel out of the K Basins</b>
✓			<b>Quadruple the plutonium stabilization rate at PFP (604 items)</b> <i>3 new processes implemented, 652 items stabilized</i>
	✓		<b>Begin shipments of transuranic waste to New Mexico for permanent disposal</b> <i>3 shipments, 18 cubic meters</i>
	✓		<b>Begin moving surplus uranium off site</b>
✓			<b>Complete cleanup of 41 waste sites near the Columbia River</b> <i>42 waste sites completed</i>
✓			<b>Move 300,000 tons of contaminated soil away from the river</b> <i>More than 600,000 tons of soil moved</i>
✓			<b>Treat and dispose of 1,060 cubic meters of mixed low-level waste</b> <i>Treated and disposed of 1,203</i>
	✓		<b>Dispose of 6,936 cubic meters of low-level waste</b>
		✓**	<b>Complete 19 shipments of remote-handled waste from B-Cell cleanout operations</b> <i>** Final accounting showed all 19 shipments by 9/30/00</i>
✓			<b>Decommission or deactivate 35 buildings</b> <i>Completed 45 buildings</i>

\*From the Tri-Party Agreement, DOE-HQ commitments, DOE Richland work plans, and other sources



## FY 2001 Commitments\*

Scorecard

**Move 116 metric tons of spent nuclear fuel out of the K West Basin**

**Stabilize 527 plutonium metal/oxide/polycube items**

**Ship 33 cubic meters of transuranic waste to the Waste Isolation Pilot Plant in New Mexico**

**Complete cleanup of 12 waste sites near the Columbia River**

**Move 490,000 tons of contaminated soil away from the Columbia River**

**Treat and dispose of 420 cubic meters of mixed low-level waste**

**Dispose of 6,718 cubic meters of low-level waste**

**Remove and transfer 235 metric tons of uranium billets and 4.5 metric tons of uranium dioxide to DOE's Portsmouth Site in Ohio**

**Complete 80% of F Reactor Interim Safe Storage Project**

**Complete 90% of DR Reactor Interim Safe Storage Project**

\*From the Tri-Party Agreement, DOE-HQ commitments, DOE Richland work plans, and other sources  
(Made public December 2000)

***Maintaining the Momentum***