



Rocky Flats: Nuclear
Weapons Component Manufacturing

Cleanup

National Wildlife Refuge



Fernald: Uranium Processing

Cleanup

Wetlands

EM Cleanup Progress and FY 2009 Budget

*Reducing risk to our country, citizens, and
environment through nuclear waste cleanup*



EM Environmental Management

safety ❖ performance ❖ cleanup ❖ closure

www.em.doe.gov

EM manages the largest environmental cleanup program in the world



Two million acres, the size of Rhode Island and Delaware combined



34,000 Workers



Enough nuclear waste to fill the Superdome



4,500 facilities to cleanup/demolish



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Our program requires us to . . .



Work with some of the most dangerous substances known to humanity



Perform first-of-a-kind tasks in highly hazardous work environments



Design, construct and operate first-of-a-kind technology and facilities to solve problems that once seemed unsolvable



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We have demonstrated successes . . .



Remediation of **89** of **105**
total sites



Retrieval of tank waste



Disposal of transuranic
(TRU) waste



Stabilization and
storage of plutonium



Groundwater pump-and-treat



Decontamination and
decommissioning (D&D) of
hundreds of facilities



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But significant cleanup challenges lie ahead . . .



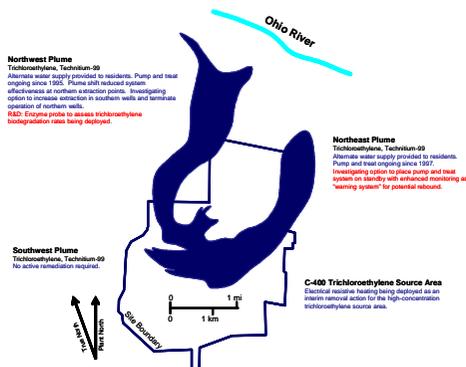
Remediating **88 million** gallons of liquid radioactive waste . . .



. . . stored in more than **200** aging underground tanks. . .



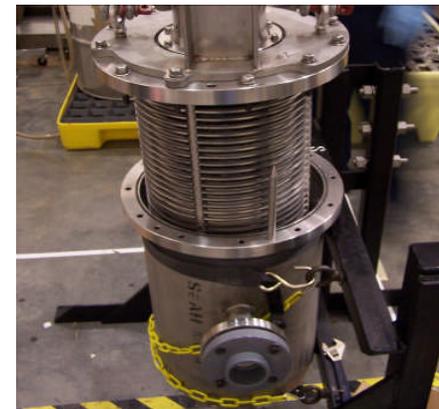
. . . equivalent to **22,000** containers of high-level waste.



Remediating **100** sq. miles of contaminated groundwater.



Maintaining a stable and skilled workforce.



Identifying new technologies.



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We have created the world's greatest nuclear cleanup organization . . .



Managers, Scientists, Engineers, Technicians, and Support Personnel



Equipment and Facilities

Safety Processes and Procedures



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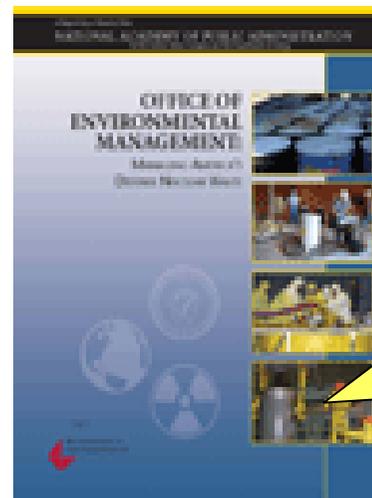
And are creating a corporate culture of excellence . . .

Corporate Best Practices Adopted

Performance Recognized by National Organizations



- High-performing organization principles
- Independent validation lifecycle costs and schedules
- Integration of procurement functions
- Project management processes
- Business management processes
- Senior management focus on project execution



“EM is on a solid path to becoming a high-performing organization.”

--National Academy of Public Administration



• **2006 Project of the Year (Rocky Flats)**

• **2007 Project of the Year (Fernald)**

-- Project Management Institute



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We are making significant cleanup progress . . .

| Cleanup Area | Projected FY08-09 Achievements |
|--|---|
| Tank Waste Processing | <ul style="list-style-type: none"> • Hanford Waste Treatment and Immobilization facility construction will be 56% complete by end FY09 • Continue construction of the Sodium Bearing Waste facility at Idaho and the Salt Waste Processing facility at Savannah River through FY09 • Grout and close 7 underground tanks at Idaho in FY08 |
| Consolidation and Disposition of Surplus Plutonium, Spent Nuclear Fuel, and Uranium | <ul style="list-style-type: none"> • Begin disposition of surplus non-pit plutonium at Savannah River in FY08 • Complete consolidation of Hanford plutonium at Savannah River in FY09 • Complete K West sludge containerization at Hanford in FY08 • Complete all wet to dry spent fuel transfers at Idaho by end of FY09 • Complete construction and start operations of Depleted Uranium Hexafluoride (DUF6) Conversion Facilities at Portsmouth and Paducah by end of FY09 • Finalize the design for uranium-233 blend down equipment and initiate Building 3019 modifications at Oak Ridge by the end of FY09 |
| Disposition of Legacy Waste | <ul style="list-style-type: none"> • Begin shipping remote/contact handled transuranic waste from Oak Ridge to WIPP in FY08 • Complete shipment of transuranic legacy drums at Savannah River to WIPP for disposal in FY09 • Complete shipment of all EM remote handled transuranic waste at Idaho to WIPP in FY08 • Complete disposition of legacy low-level, mixed low-level and PCB waste at Paducah in FY09 |
| Soil and Groundwater Remediation and D&D | <ul style="list-style-type: none"> • Begin operations of enhanced groundwater remediation for hexavalent chromium at Hanford in FY09 • Complete decontamination and decommissioning of Test Area North at Idaho in FY08 • Demolish east wing of the K-25 processing facility in Oak Ridge in FY09 • Complete demolition of K-East basin at Hanford in FY09 |
| Site Cleanup Completions | <ul style="list-style-type: none"> • Complete cleanup of 4 sites in FY08 and 2 more in FY09 |

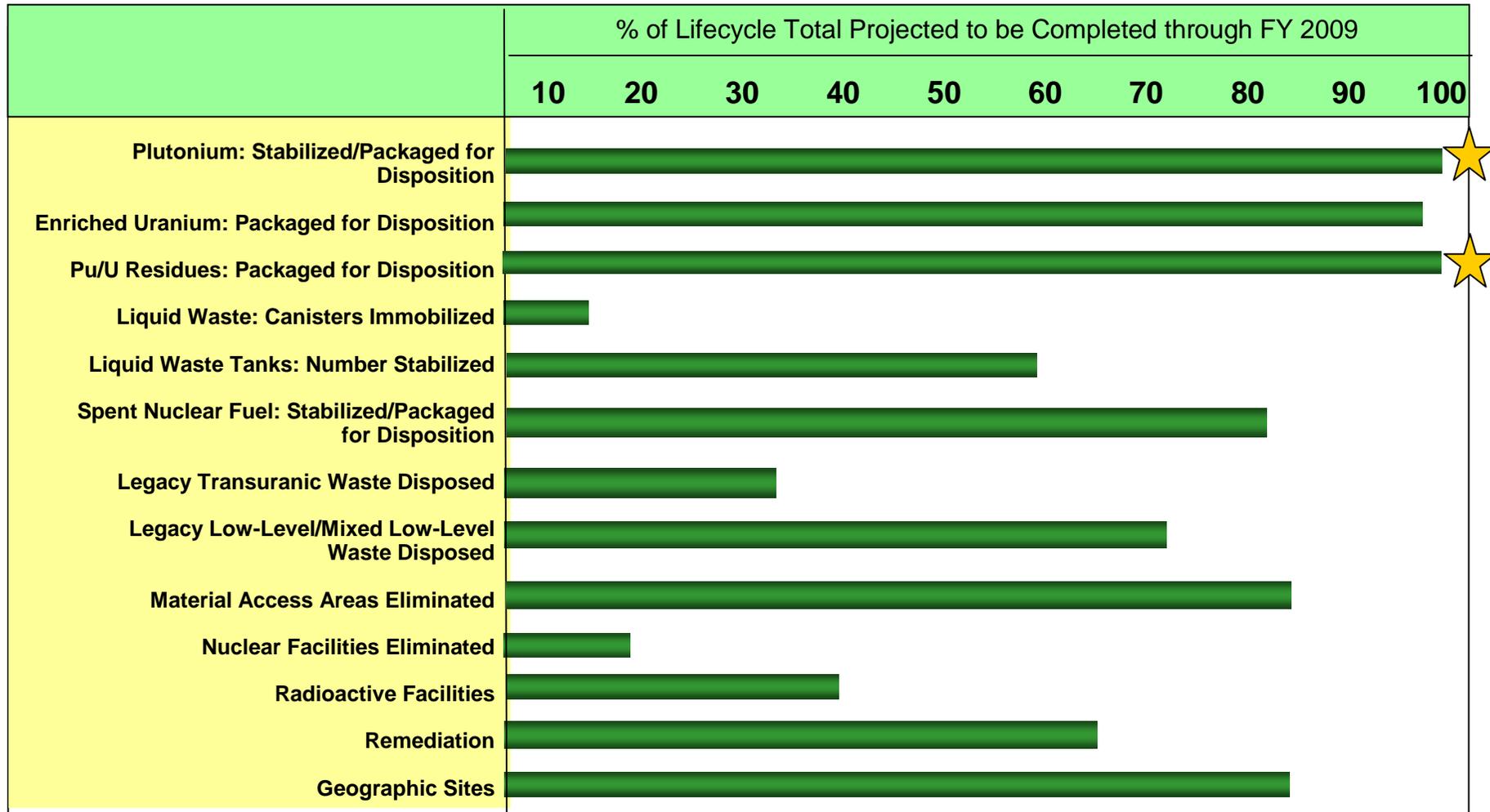


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Bringing us closer to our destination . . .



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★ Completed

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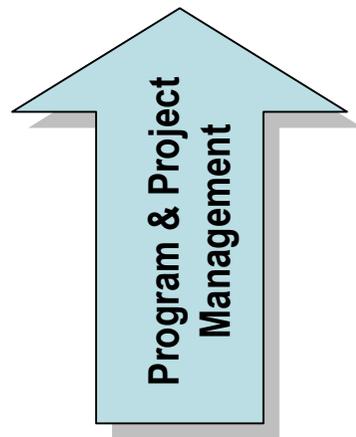
Our priorities . . .

#1 Priority:
Safety



Reduce risk while maximizing regulatory compliance

- Construct **waste treatment facilities** to clean up tank wastes
- Consolidate and prepare for disposal of **surplus plutonium** and **spent nuclear fuel**
- Continue disposal of **transuranic and low-level waste**
- Continue **soil and groundwater remediation**
- Continue decontamination and decommissioning of **unneeded facilities**



Strengthen program and project management

- Implement **National Academy of Public Administration** recommendations
- Independently verify **project baselines** – scope, cost, schedules
- Strive for “**Best in Class**” capability
- Assure effective identification and **management of risk**
- Implement more effective **acquisition process**
- Develop and deploy needed **technologies**
- Focus on **project execution** through enhanced use of
 - Earned Value Management Systems and
 - Ongoing performance reviews by project and senior EM managers



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EM and DOE budgets by state . . .

(dollars in thousands)

| State | FY08 EM Appropriation (a) | FY08 DOE Appropriation | FY09 EM Request (a) | FY09 DOE Request |
|-----------------------|------------------------------|---------------------------|------------------------|---------------------|
| California | \$27,854 | \$2,231,310 | \$17,603 | \$2,201,153 |
| Colorado | 6,150 | 652,165 | 9,302 | 575,976 |
| Idaho | 523,485 | 1,167,797 | 447,400 | 1,202,194 |
| Illinois | 433 | 888,824 | 459 | 955,335 |
| Kentucky | 142,219 | 158,059 | 153,433 | 157,946 |
| Nevada | 84,408 | 728,533 | 69,354 | 755,880 |
| New Mexico | 408,946 | 4,536,467 | 396,630 | 4,227,103 |
| New York | 111,257 | 976,583 | 82,933 | 1,017,696 |
| Ohio | 304,394 | 378,323 | 320,444 | 376,840 |
| South Carolina | 1,327,663 | 1,931,111 | 1,390,693 | 2,258,948 |
| Tennessee | 505,186 | 2,440,822 | 464,872 | 2,517,332 |
| Texas | 20,027 | 617,034 | 0 | 651,707 |
| Utah | 23,734 | 72,672 | 30,513 | 73,527 |
| Washington State | 2,019,803 | 2,459,803 | 1,981,096 | 2,419,217 |
| Washington, DC | 189,404 | 3,475,178 | 165,030 | 3,890,867 |
| Non-EM States | 0 | 3,313,698 | 0 | 3,366,841 |
| Subtotal | \$5,694,963 | \$26,028,379 | \$5,529,762 | \$26,648,562 |
| Prior Year Adjustment | | | -1,762 | 0 |
| TOTAL | \$5,694,963 | \$26,028,379 | \$5,528,000 | \$26,648,562 |

(a) Distribution includes funding for Program Direction and Safeguards & Security



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EM budget by site . . .

(dollars in thousands)

| Site | FY 2008 Appropriation | FY 2009 Request |
|---|--------------------------|--------------------|
| Carlsbad | 246,599 | 224,852 |
| Idaho | 523,485 | 447,400 |
| Oak Ridge | 505,186 | 464,872 |
| Paducah | 142,219 | 153,433 |
| Portsmouth | 225,026 | 242,561 |
| Richland | 1,028,600 | 980,088 |
| River Protection | 991,203 | 1,001,008 |
| Savannah River | 1,327,663 | 1,390,693 |
| NNSA Sites | 302,661 | 256,632 |
| Closure Sites | 76,846 | 78,325 |
| West Valley Demonstration Project | 55,485 | 59,000 |
| All Other Sites | 80,586 | 65,868 |
| HQ Operations | 168,210 | 132,641 |
| Tech. Development & Deployment | 21,194 | 32,389 |
| D&D Fund Deposit | 458,787 | 463,000 |
| Subtotal | 6,153,750 | 5,992,762 |
| Offsets (D&D and Prior Year Adjustment) | (458,787) | (466,524) |
| TOTAL | 5,694,963 | 5,528,000 |



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Issues to be resolved . . .

Regulatory Compliance

The Administration recognizes EM's FY 2009 budget request would not enable the Department to meet some of the milestones contained in agreements that have been negotiated with regulators over many years.

Milestones

Incomplete knowledge of complexity, inconsistent performance, overly optimistic assumptions, and emerging technical barriers have been impediments.

Tools for Resolution

Independently audited cost and schedule baselines, life-cycle planning estimates, and "analytical building blocks" will provide a basis for conducting credible and defensible analyses.

Path to Resolution

Using these tools, we will engage in meaningful dialogue with regulators, stakeholders, and Tribal Nations to assess existing priorities and mutually identify opportunities to complete cleanup.



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What EM's FY 2009 Budget delivers . . .

Safety

Ensures safe and secure conditions for all planned operations.

Risk *Prioritization*

Fully funds our most costly and high-risk projects to address liquid tank waste.

Risk *Reduction*

. . . for targeted D&D and soil/groundwater remediation.

Waste Disposal Progress

Continued progress to process and dispose of stored waste (transuranic, low-level and mixed wastes)

Key Departmental Missions

. . . for special nuclear material processing and disposition (H-Canyon, plutonium disposition, and 3019).



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