



U.S. DEPARTMENT OF **ENERGY**

Office of Environmental Management Update Environmental Management Site-Specific Advisory Board Chairs' Meeting June 15, 2011

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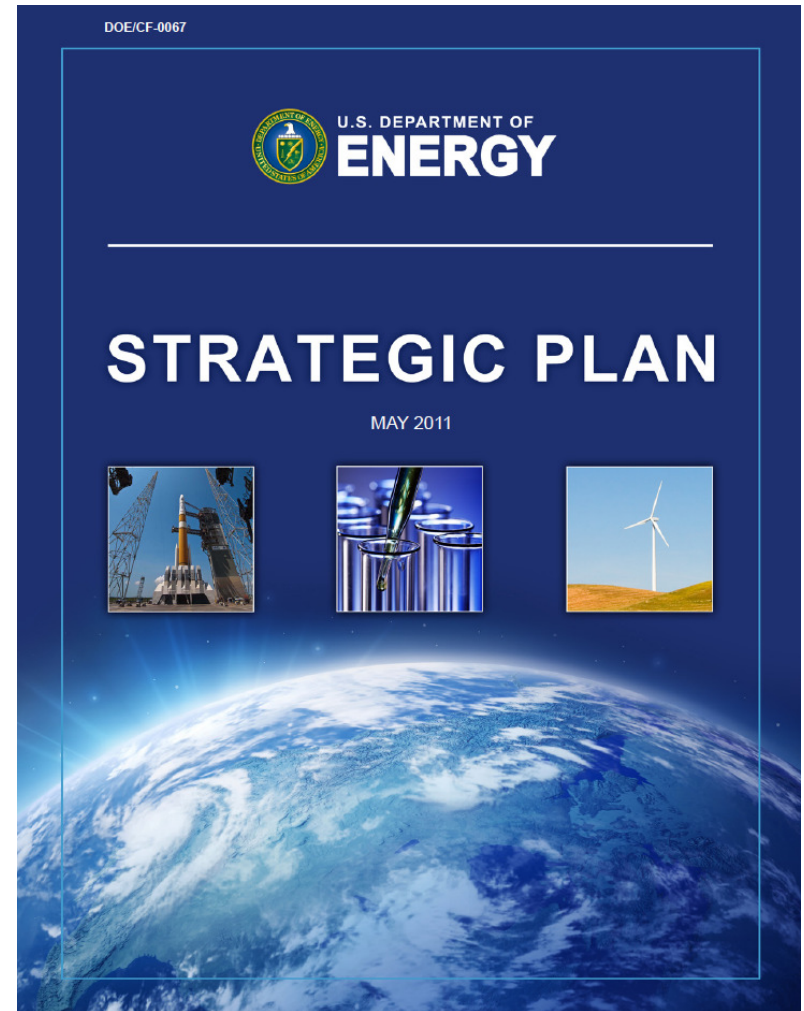
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DOE's Strategic Plan highlights EM's important role.

Complete Environmental Remediation of our Legacy and Active Sites

- Protect Human Health and the Environment
- Maximize Success of Construction and Operations Outcomes
- A Technical Roadmap to Address Radioactive Liquid Tank Waste
- Ensure a Long-Term Solution to the Cold War's Environmental Legacy



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Targeted Outcomes in the DOE Strategic Plan

➤ Protect Human Health and the Environment

- Reduce Cold War legacy waste site footprint by 40% (to 540 square miles) by 2011 (High Priority Performance Goal) and by 90% (approximately 90 square miles) by 2015

➤ Maximize Success of Construction and Operations Outcomes

- Develop and apply advanced modeling and simulation tools in 2011 to accelerate progress on Environmental Management technical challenges
- Develop novel methods for addressing high-level waste that can accelerate progress and reduce costs of this multidecadal program, with a 2012 target date for the first demonstration



EM's Journey to Excellence provides the roadmap to stay focused . . .

Goal 1: Complete the three major tank waste projects within the current approved baselines

Goal 2: Reduce the life cycle costs and accelerate the cleanup of the Cold War environmental legacy

Goal 3: Complete the disposition of 90% of the legacy transuranic waste by 2015

Goal 4: Reduce the EM legacy footprint by 40% by the end of 2011, leading to approximately 90% reduction by 2015

EM's Vision

To be viewed as one of the best managed government programs and the employer of choice in the Federal Government

EM's Mission

To safely transform the environmental legacy of the Cold War into assets available for the Nation's future by completing quality cleanup work on schedule and within cost, delivering demonstrated value to the American taxpayer

Goal 5: Improve safety, security and quality assurance towards a goal of zero accidents, incidents, and defects

Goal 6: Improve contract and project management with the objective of delivering results on time, and within cost

Goal 7: Achieve excellence in management and leadership, making EM one of the best places to work in the Federal Government



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. . . amidst changes, such as the various Headquarters' actions and initiatives.

DOE HQ

- EM reporting to Deputy Secretary
- Additional personnel in the Deputy Secretary's office
- Workforce Reshaping
- Support services contractor moratorium
- S1 initiative: Improving Mission Execution
 - Six outcomes being pursued
 - S1 Review of EM Program and Project Organizations part of Outcome 4
- Blue Ribbon Commission on America's Nuclear Future

EM HQ

- Top to bottom review of program direction and program support accounts
- Project sponsor for line-item construction projects



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EM has clear, risk-based priorities.

- Activities to maintain a **safe, secure, and compliant** posture in the EM complex
- **Radioactive tank waste** stabilization, treatment, and disposal
- **Spent (used) nuclear fuel** storage, receipt, and disposition
- **Special nuclear material** consolidation, processing, and disposition
- **Transuranic** and **mixed/low-level waste** disposition
- **Soil and groundwater** remediation
- Excess facilities **decontamination and decommissioning (D&D)**



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Goal 1: Complete the three major tank waste treatment construction projects within the approved baselines . . .

Sodium Bearing Waste Facility

Construction complete 2011 (operational 2012)



Salt Waste Processing Facility

Construction complete 2014 (operational 2014)



Waste Treatment Plant

Construction complete 2016 (operational 2019)

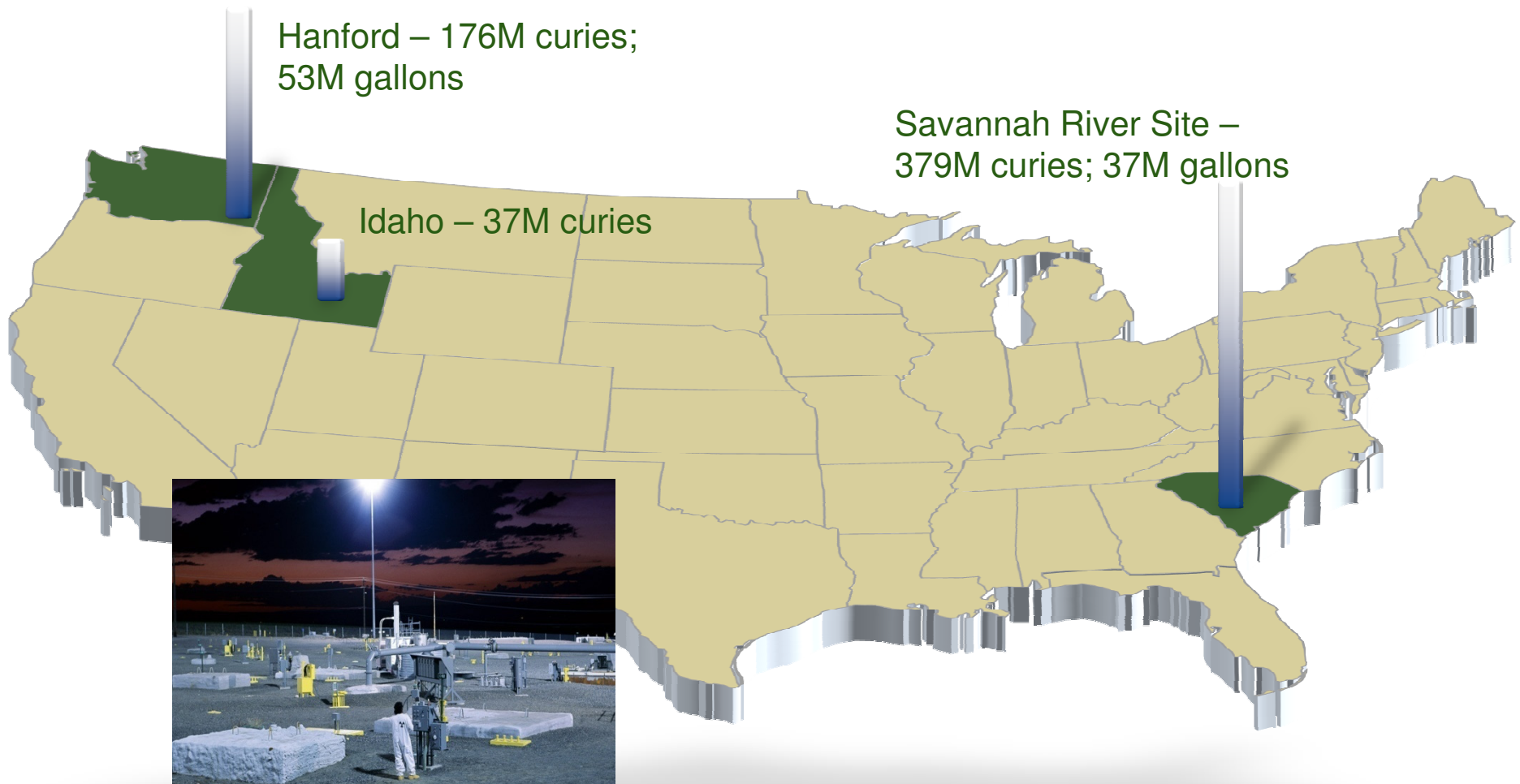


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... to treat 90M gallons/~600M curies of radioactive tank waste.



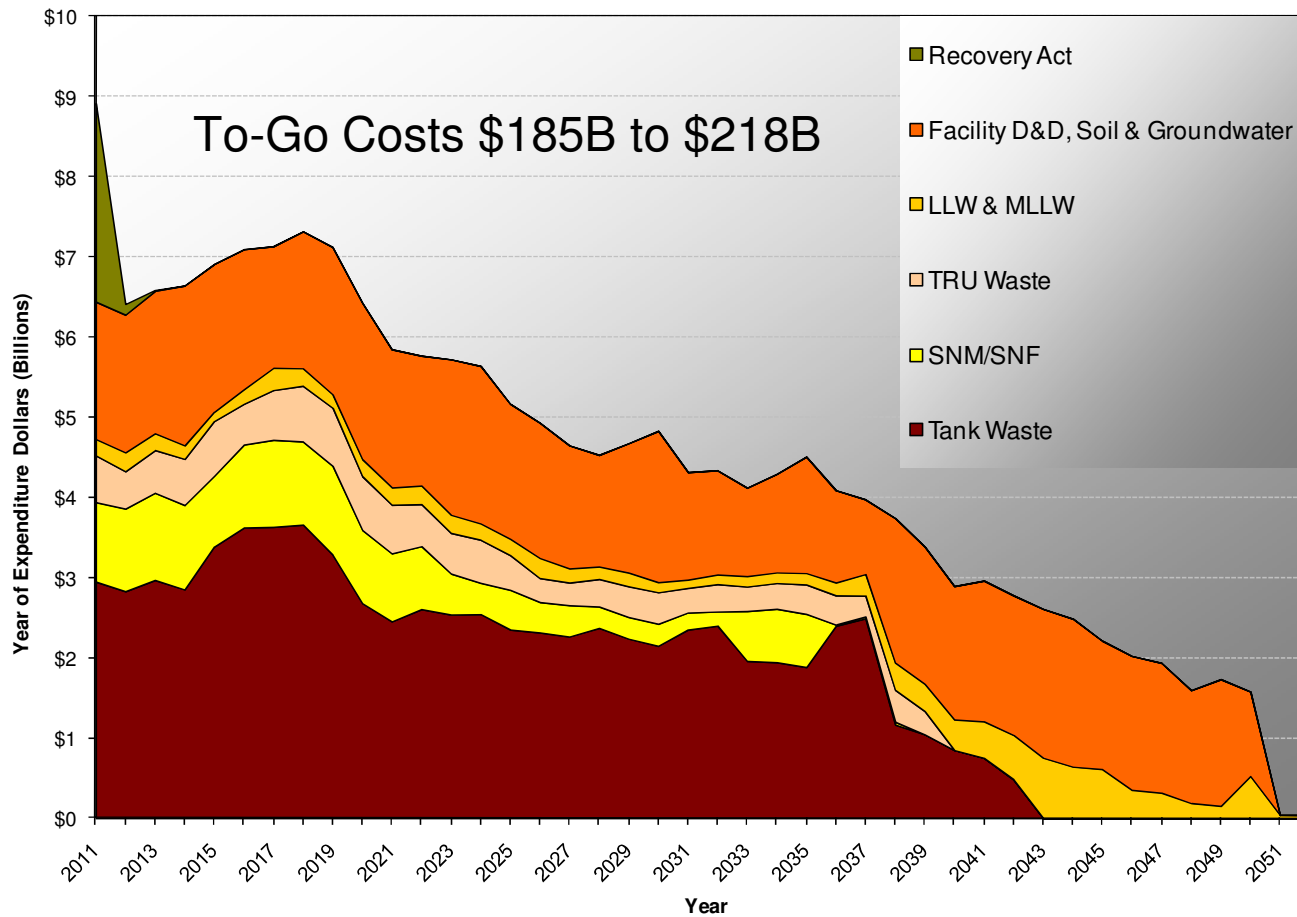
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Goal 2: Reduce the life-cycle costs and accelerate the cleanup of the Cold War environmental legacy.

Environmental Management Costs by Program Area



Life Cycle Cost Reduction:

- Tank Waste Technology
- Acceleration of schedule for Tanks and Footprint Reduction
- Reduced uncertainty in regulatory environment



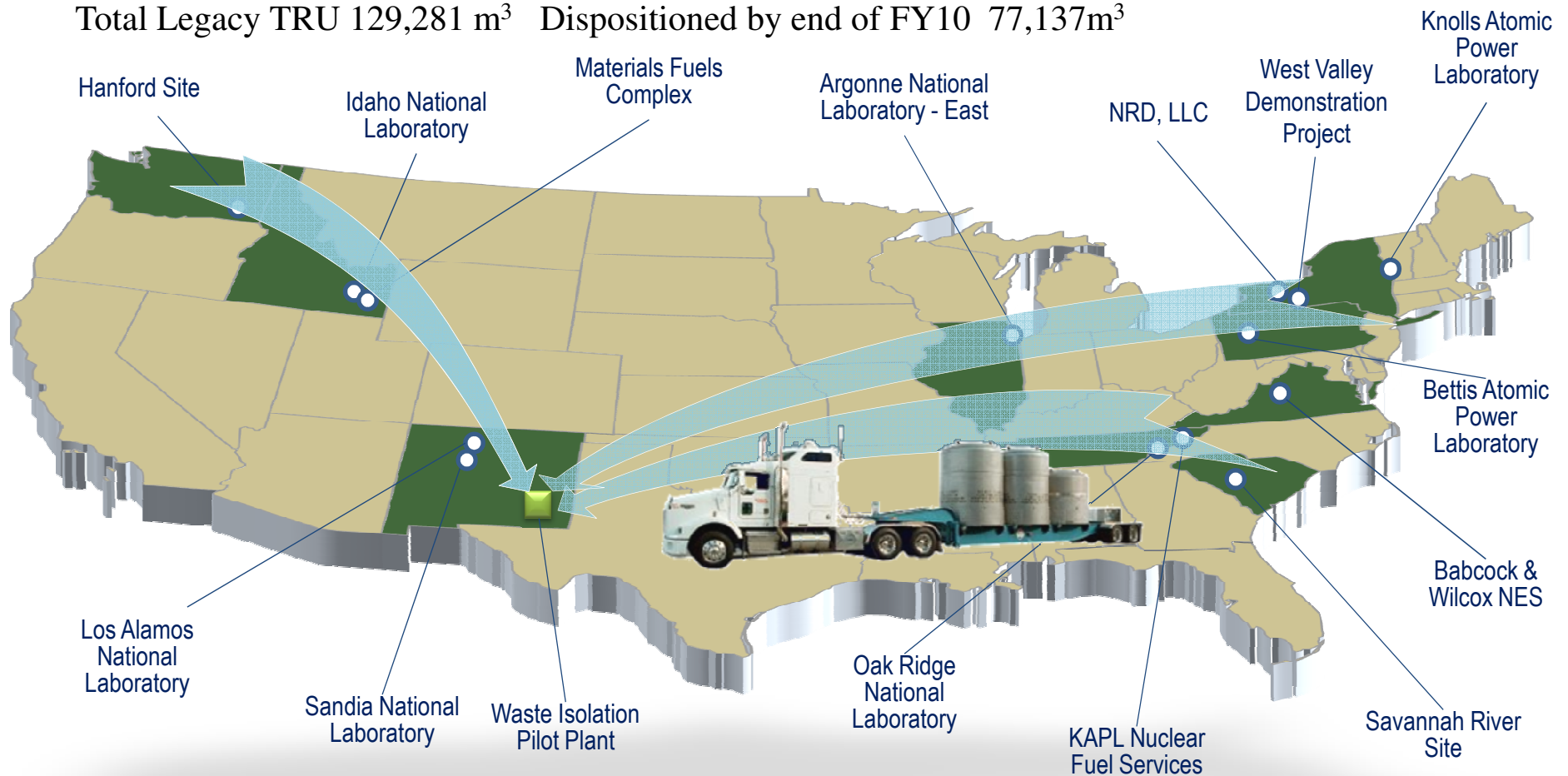
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Goal 3: Complete disposition of 90 percent of the legacy transuranic waste by the end of 2015.

Total Legacy TRU 129,281 m³ Dispositioned by end of FY10 77,137m³



Shipments¹ > 9,600 **Safe Loaded Miles²** > 11,511,651 **Total dispositioned to date³** 76,650 m³ **Life-cycle estimate** 157,976 m³



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¹As of May 29, 2011 ²As of May 23, 2011 ³As of June 1, 2011 IPABS report

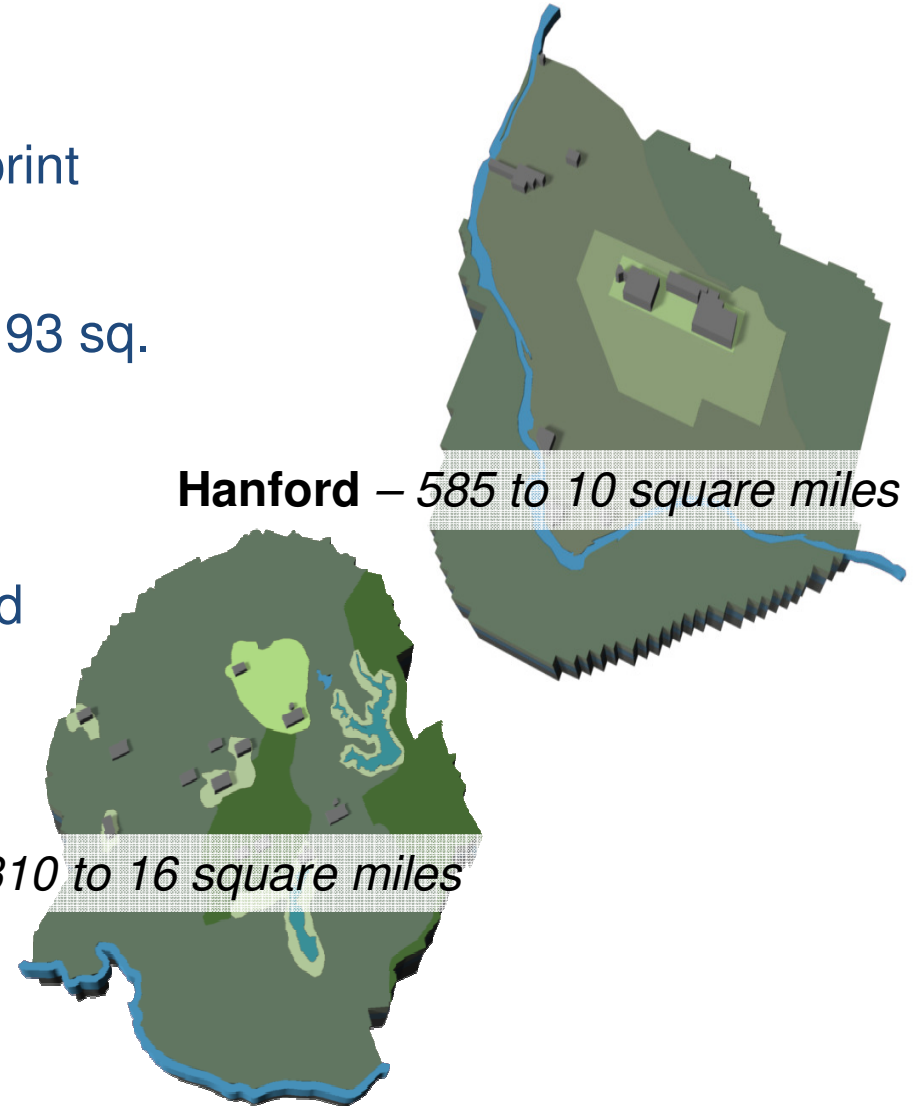
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Goal 4: Reduce the EM legacy footprint by 40 percent by the end of 2011, leading to approximately 90 percent reduction by 2015.

- In 1989, legacy cleanup footprint was 3,125 sq miles
- By 2015, it will be reduced to 93 sq. miles
- 2,636 facilities completed
- 7,745 remediations completed

Hanford – 585 to 10 square miles

Savannah River - 310 to 16 square miles



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Goal 5: Improve safety, security and quality assurance towards a goal of zero accidents, incidents, and defects.

SAFETY

- Safety is an EM core value
- Improve strategy for effective interaction with the DNFSB
- Performance (TRC and DART) is excellent
- Robust line oversight is essential
- Implementation of ISMS
- Implementation of Work Planning and Control guidance
- Follow-up on lessons learned and input to Safety Bulletin
- Establishment of Nuclear Safety and Security Committee
- Improvement of QA on projects



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Goal 6: Improve contract and project management with the objective of delivering results on time and within cost.

- 91 cleanup projects in the EM Recovery Act portfolio
 - 42 capital projects and 49 operational activities
 - 95% are on cost and schedule
 - Routinely reviewed by the GAO and the IG
- FY 2010 – EM completed 5 out of 5 cleanup capital projects on cost and schedule
- FY 2010-2012 – Expected rolling average for EM project success, about 90%
- EM has had a lot of success on cleanup projects
 - Since 2005, 41 cleanup projects originally estimated at a total cost of \$14.4B have been completed for an actual cost of \$13.7B
 - Two cleanup projects (Rocky Flats and Fernald) won the PMI Project of the Year award
- Comparison of EM to other DOE programs

| OECM May 2011 Monthly DOE Project Portfolio Status | Organization | # of Projects Post CD-2 | \$ (M) | % of \$ Value with Acceptable Status | % No. of Projects with Acceptable Status |
|--|--------------|----------------------------|------------|---|---|
| | EERE | 6 | \$306.7 | 100% | 100% |
| | EM | 55 | \$22,127.9 | 97% | 89% |
| | NA | 17 | \$6,878.6 | 98% | 88% |
| | SC | 22 | \$2,574.3 | 100% | 100% |



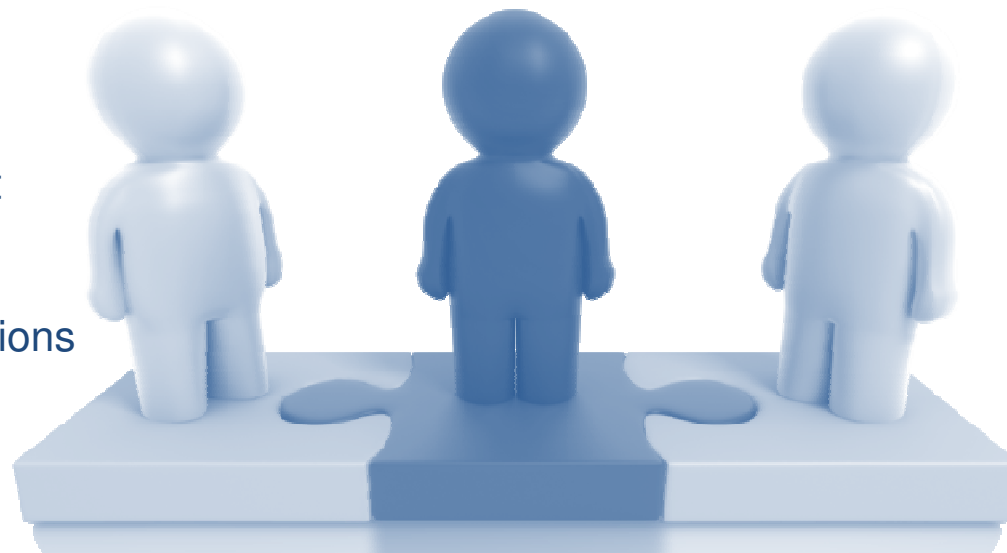
Goal 7: Achieve excellence in management and leadership, making EM one of the best places to work in the Federal Government.

EM's Vision

To be viewed as one of the best managed government programs and the employer of choice in the Federal Government.

Benchmarking

Capitalizing on best practices/lessons learned from high achieving organizations



OPM Survey Data

Short and long-term recommendations for the Employee Viewpoint Survey Action Plan

Continuous Improvement Program

Build on existing efforts to ensure commitments made by EM leadership are tracked and completed



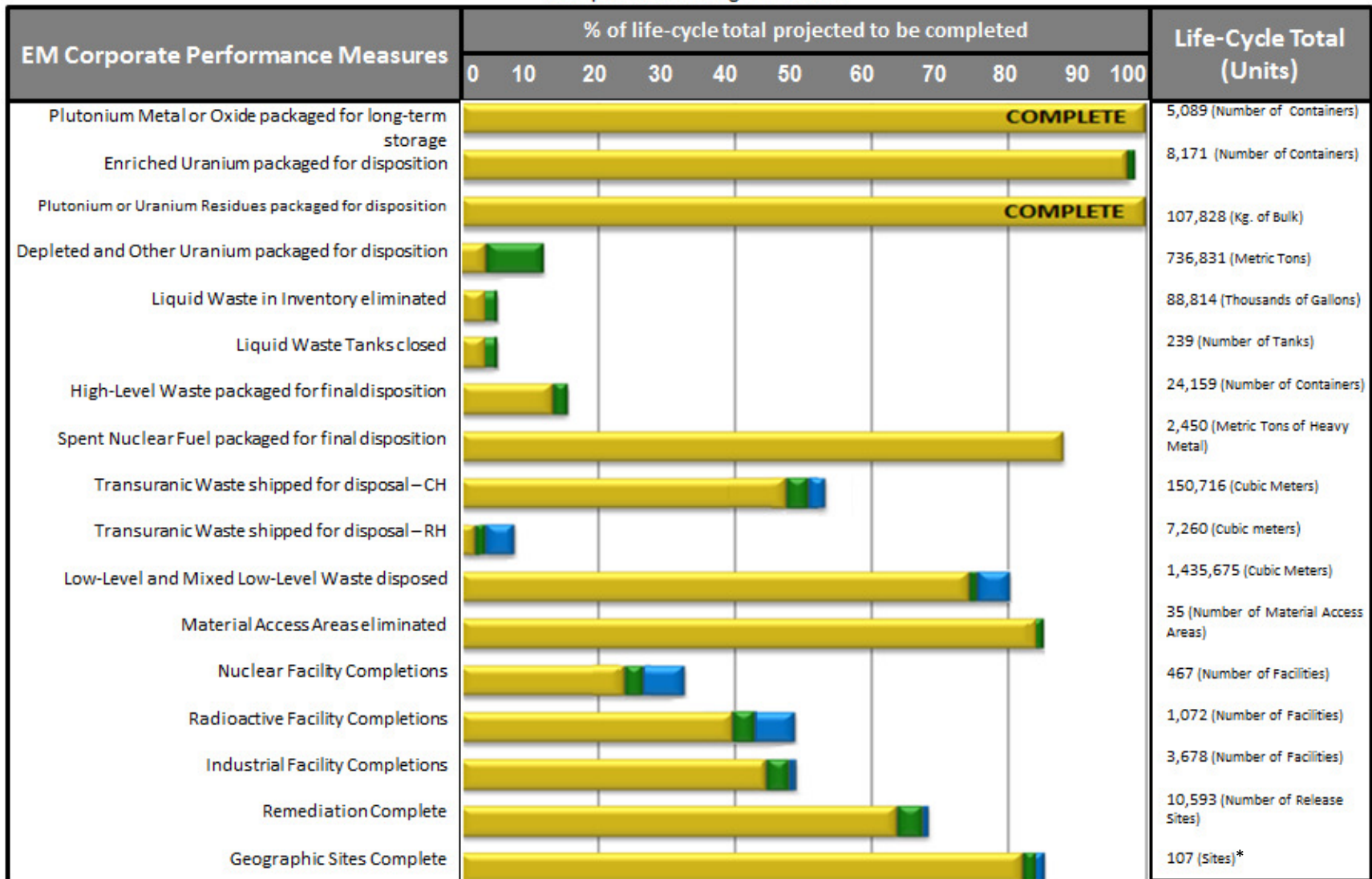
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Corporate Performance Metric Life-Cycle Chart

Completions through FY 2012



Legend

EM Actuals to Date (including FY 2010 Actuals for both ARRA and BASE)

FY 2011 and FY 2012 Targets - BASE

FY 2011 and FY 2012 Targets - ARRA



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* Original 110 Sites changed legislatively in 1998. Current inventory is 107 Sites.

EM is committed to meeting our regulatory obligations . . .

Regulatory History

- **DOE created EM to place a focus on bringing its sites into compliance, and entered into a series of site-specific enforceable cleanup agreements that provide the mechanism for bringing those sites into compliance**
- **These agreements allow DOE to maintain ongoing operations and the critical missions they support while achieving compliance with governing environmental laws not only in EM but also in NNSA, Science and Nuclear Energy**

Regulatory Framework

- **EM has approximately 40 compliance agreements across its various sites with Federal and state regulators based primarily on RCRA and CERCLA**
- **Stakeholder input is required for most regulatory documents and can significantly impact requirements**
- **EM had 141 major enforceable milestones in FY10 of which we met 95%, and 160 major enforceable milestones in FY11 of which we expected to meet 100% with full funding**



. . . while improving project management.

- 91 cleanup projects in the EM Recovery Act portfolio
 - 42 capital projects and 49 operational activities
 - 95% are on cost and schedule
 - Routinely reviewed by the GAO and the IG
- FY 2010 – EM completed 5 out of 5 cleanup capital projects on cost and schedule
- FY 2010-2012 – Expected rolling average for EM project success, above 90%
- EM has had a lot of success on cleanup projects
 - Since 2005, 30 cleanup projects originally estimated at a total cost of \$12.9B have been completed for an actual cost of \$12.1B
 - Two cleanup projects (Rocky Flats and Fernald, with total project costs originally estimated at \$7.5B, and \$3.1B, respectively) won the Project Management of the Year Award from the Project Management Institute.

| OECM March 2011 Monthly DOE Project Portfolio Status | Organization | # of Projects Post CD-2 | \$ (M) | % of \$ Value with Acceptable Status | % No. of Projects with Acceptable Status |
|--|--------------|----------------------------|------------|---|---|
| | EERE | 5 | \$262.7 | 100% | 100% |
| | EM | 59 | \$22,487.1 | 97% | 88% |
| | NA | 17 | \$6,878.6 | 89% | 82% |
| | SC | 23 | \$2,593.1 | 100% | 100% |



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. . . and making real progress . . .

Recovery Act Success

- **Demolition Debris and Soil** – Permanently disposed 1,220,031 cubic meters of debris and soil, which is enough to fill 488 Olympic swimming pools
- **Facility Completions** – Completed demolition or cleanup of 180 of 261 facilities.
- **TRU Waste** – Dispositioned 2,959 cubic meters of transuranic waste. This waste has been removed from sites' inventories
- **Low-Level Waste/Mixed Low-Level Waste** – Disposed 78,925 cubic meters of low-level and mixed low-level waste, equal to 379,087 55-gallon drums
- **Groundwater Wells** – Installed 448 remediation and monitoring wells
- **Mill Tailings** – Disposed close to 2.2 million tons of uranium mill tailings, surpassing the goal for disposal of the tailings with Recovery Act funding at the Moab Site in Utah



EM is facing real challenges after the FY 2011 Continuing Resolution . . .

➤ **The final FY 2011 Operating Plan for EM is \$5.689 billion**

- 6.3% or a \$358 million reduction from the FY 2011 request
- 3,000 Recovery Act workforce reductions already announced; evaluating additional workforce reductions across the complex related to the FY 2011 Operating Plan

➤ **Looking for additional efficiencies to continue progress on cleanup**

- Evaluating all operations for improvements while maintaining safety first priority
- Looking to align the workforce to meet the cleanup mission need
- Building on efficiencies that were essential to completing Recovery Act projects
- Evaluating opportunities for efficiencies in cleanup approaches and work required under enforceable agreements



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... which may continue into FY 2012 and beyond.

- **Site Managers evaluated impacts for FY 2011**
 - with potential further impacts in FY 2012
- **FY 2012 Budget Request of \$6.1B positions EM to support completion of all FY 2012 enforceable milestones**
- **EM is analyzing potential compliance, workforce, and other programmatic impacts under several “what-if” scenarios for FY 2012**
 - Case 1: \$5.689B (at FY 2011 Operating Plan, a 7.8% reduction from the FY 2012 request)
 - Case 2: \$5.405B (additional 5% reduction from FY 2011 Operating Plan)
- **Congress begins markup of the FY 2012 appropriation bills**
 - HEWD provides \$5.599B for environmental management activities - a reduction of \$530M below the FY 2012 Request



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... which may continue into FY 2012 and beyond.

- **EM's first priority within our FY 2011 operating plan remains the completion of compliance milestones.**
- **EM will continue to evaluate the contractor workforce requirements across the complex and make the necessary adjustments based on specific site impacts.**
- **The new budget reality means we must continue the focus on operating more efficiently to achieve the EM cleanup mission.**
 - We need to continue evaluating all operations and find more efficiencies – while maintaining safety standards and addressing the highest risk cleanup challenges first.
 - We must continue to align/right size the contractor workforce to meet the cleanup mission given the new budget constraints.



EM's National Cleanup: A Sound Investment



2020 Cleanup Vision:

By 2020, EM legacy cleanup will be virtually completed. Hanford will be the only large site remaining. Minor cleanup will remain at Savannah River, Portsmouth, and Oak Ridge.



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Focus Areas for the EM SSAB

- Budget Priorities
- Waste Disposition Strategies
- Public Involvement



Santa Fe, New Mexico, September 2010

