



U.S. DEPARTMENT OF  
**ENERGY**



# *Update on the Office of Environmental Management*

**October 21, 2009**



**EM** *Environmental Management*

safety ❖ performance ❖ cleanup ❖ closure

[www.em.doe.gov](http://www.em.doe.gov)

# Presentation Topics

## Example of Delivering Performance: Cleanup of Rocky Flats Site



- Mission and Priorities
- EM Organization
- Journey to Excellence
- Actions to Improve Performance and Reduce Costs
- EM Base and Recovery Act Work
- EM's International Objectives
- Focus Areas for EMAB



**EM** Environmental Management

safety ❖ performance ❖ cleanup ❖ closure

[www.em.doe.gov](http://www.em.doe.gov)

# EM Mission and Priorities

## Mission

**“Complete the safe cleanup of the environmental legacy brought about from five decades of nuclear weapons development, production, and Government-sponsored nuclear energy research.”**



Radioactive tank waste remains a top priority.

## Our Priorities Are the Same

- Essential activities to maintain a safe and secure posture in the EM complex
- Radioactive tank waste stabilization, treatment, and disposal
- Spent nuclear fuel storage, receipt, and disposition
- Special nuclear material consolidation, stabilization, and disposition
- High priority groundwater remediation
- Transuranic and mixed/low-level waste disposition
- Soil and groundwater remediation
- Excess facilities deactivation and decommissioning (D&D)



**EM Environmental Management**

safety ❖ performance ❖ cleanup ❖ closure

[www.em.doe.gov](http://www.em.doe.gov)

# Setting Goals and Achieving Them

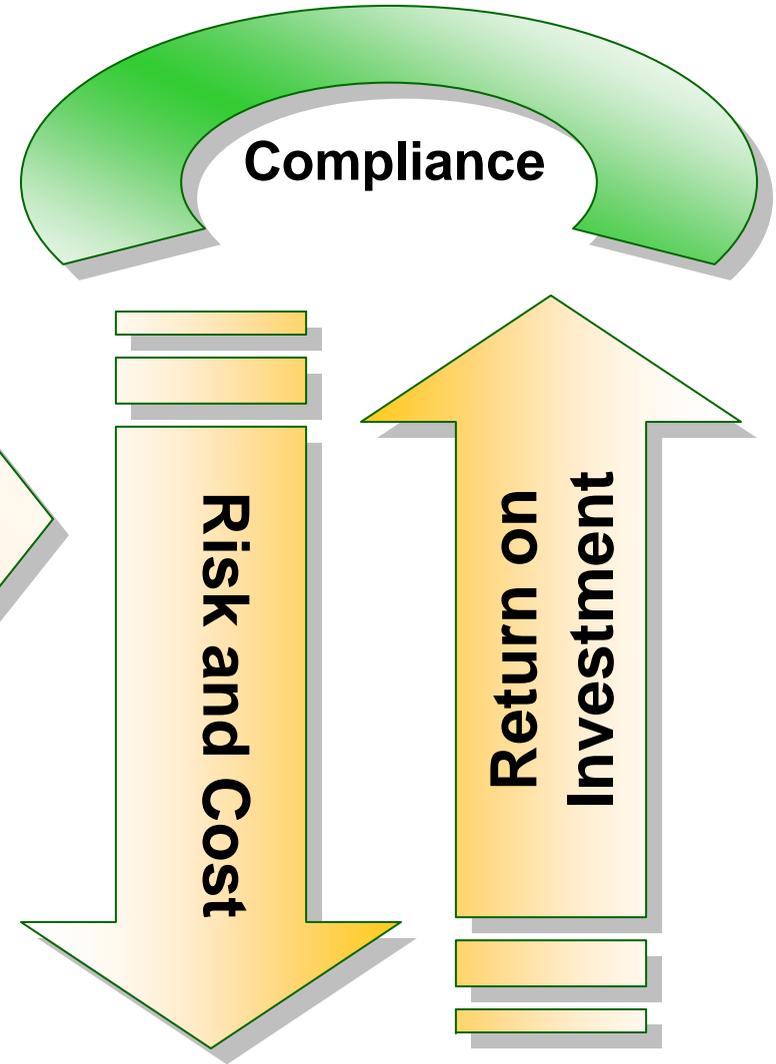
## Sound business practices

- Near term completions
- Footprint reduction

Use science and technology to optimize the efficiency of tank waste disposition

Use science and technology to optimize the efficiency of excess nuclear materials, and spent nuclear fuel disposition

Alternative management approaches for cleanup and for land use

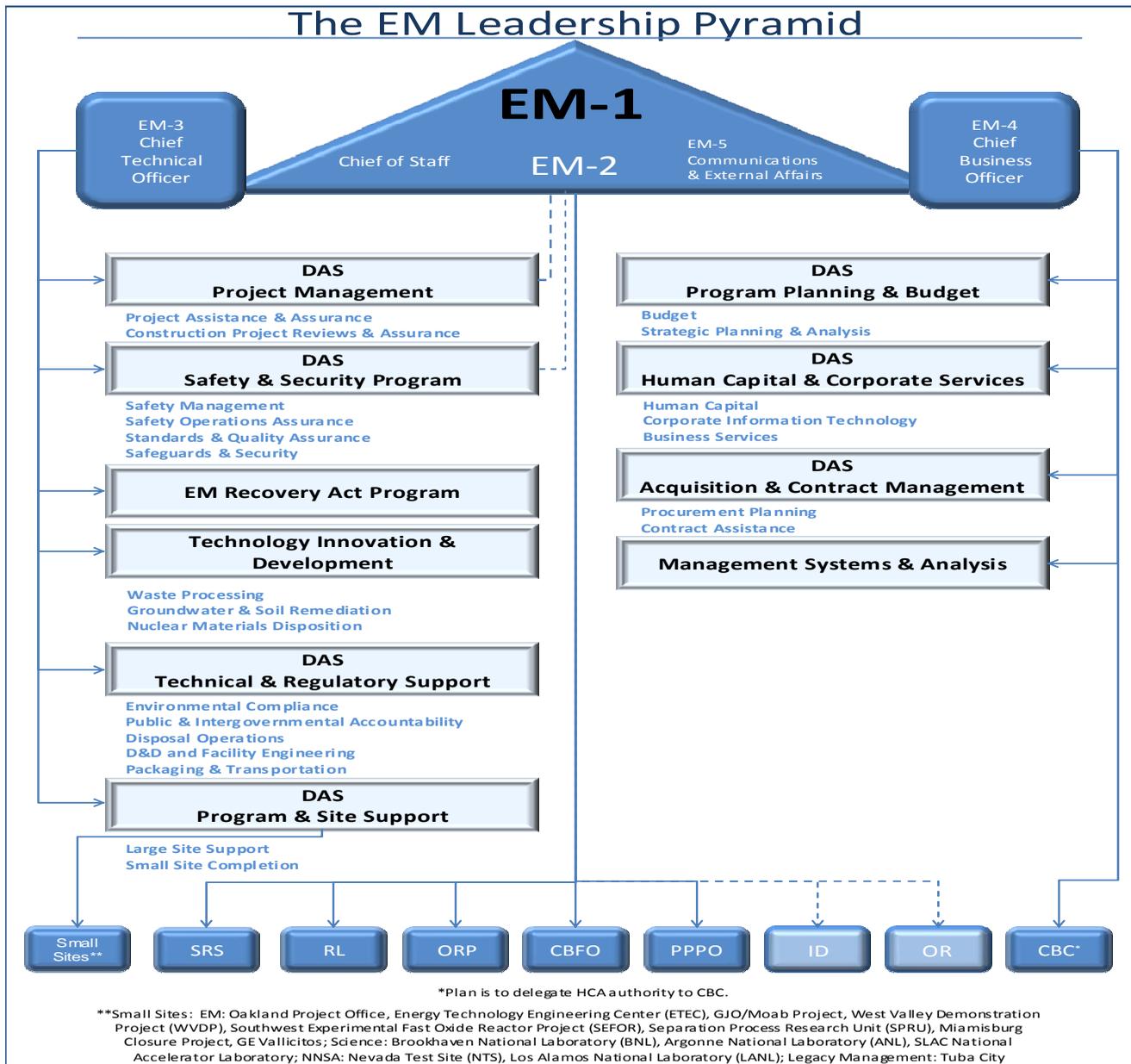


**EM** Environmental Management

safety ❖ performance ❖ cleanup ❖ closure

[www.em.doe.gov](http://www.em.doe.gov)

# EM Organization



**EM Environmental Management**

safety ❖ performance ❖ cleanup ❖ closure

[www.em.doe.gov](http://www.em.doe.gov)

# *Journey to Excellence: Delivering Performance*

## Vision

“Our vision is that EM and its contractors are recognized as being among the best at completing quality work safely, on schedule and within cost and delivering demonstrated value to the American Taxpayer.”

### 19 EM soil/water remediation and waste disposition projects completed from 2005-present

- All projects met regulatory deadlines
- 95% completed on schedule
- 84% within 10% of budget

- EM has a solid performance record on cleanup projects
- EM must improve in
  - Delivering all projects within cost and schedule
  - Reducing Operations & Maintenance costs
- This performance must be achieved with Safety as an inherent part of our value system – not to be compromised
  - No schedule, milestone or cost consideration is worth any injury
- Two areas where there is heightened visibility and scrutiny
  - Construction projects
  - Recovery Act projects



**EM** *Environmental Management*

safety ❖ performance ❖ cleanup ❖ closure

[www.em.doe.gov](http://www.em.doe.gov)

# Actions to Improve Performance

## Project Lifecycle

Identify safety requirements early...

...and incorporate them into design.

Complete more design

before

construction

- Together we must look for ways to improve performance
- Some actions have already been identified:
  - Complete more design before construction (move away from design/build)
  - Identify safety requirements early and incorporate into design
  - Improve QA, including vendors
  - Implement improved corporate project reviews
  - Improve staff capabilities in key areas
  - Consider owner representative approach

One way to better position ourselves for improving is to more appropriately categorize EM work!



**EM** Environmental Management

safety ❖ performance ❖ cleanup ❖ closure

[www.em.doe.gov](http://www.em.doe.gov)

# Modify Project Categorization Approach

DEPARTMENT OF ENERGY

ORDER

Washington, D.C.

DOE O 413.3A

Approved: 7-28-06

**SUBJECT:** PROGRAM AND PROJECT MANAGEMENT FOR  
THE ACQUISITION OF CAPITAL ASSETS

OBJECTIVES.

To provide the Department of Energy (DOE), including the National Nuclear Security Administration, with project management direction for the acquisition of capital assets with the goal of delivering projects on schedule, within budget, and fully capable of meeting mission performance, safety, and health objectives, safety, and health

Consistent Work  
Categorization

- Align projects better with DOE Order 413.3A
- Provide enhanced ability to tailor project management
- Create more manageable discrete blocks of work while still tracking life-cycle costs
- Break work into consistent categories:
  - Construction projects
  - Cleanup capital assets projects
  - Operational cleanup projects
  - Programs



**EM** Environmental Management

safety ❖ performance ❖ cleanup ❖ closure

[www.em.doe.gov](http://www.em.doe.gov)

# Focus Areas for Improvement



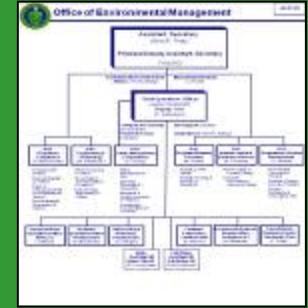
Construction only after 90% design



Enhanced Project Management and Federal Oversight (aka Owner Representative)



Restructure the EM portfolio (including acquisition strategy, scope flexibility, and chunking)



Improve Headquarters and Field interaction with better communication



Corporate functions – Improve MA, GC, OEM, and contracts management interaction



Improved external communication and outreach to stakeholders, communities, other agencies, etc.

| EM Project Review Checklist |                     |
|-----------------------------|---------------------|
| 1. PROJECT REVIEW           | 2. PROJECT REVIEW   |
| 3. PROJECT REVIEW           | 4. PROJECT REVIEW   |
| 5. PROJECT REVIEW           | 6. PROJECT REVIEW   |
| 7. PROJECT REVIEW           | 8. PROJECT REVIEW   |
| 9. PROJECT REVIEW           | 10. PROJECT REVIEW  |
| 11. PROJECT REVIEW          | 12. PROJECT REVIEW  |
| 13. PROJECT REVIEW          | 14. PROJECT REVIEW  |
| 15. PROJECT REVIEW          | 16. PROJECT REVIEW  |
| 17. PROJECT REVIEW          | 18. PROJECT REVIEW  |
| 19. PROJECT REVIEW          | 20. PROJECT REVIEW  |
| 21. PROJECT REVIEW          | 22. PROJECT REVIEW  |
| 23. PROJECT REVIEW          | 24. PROJECT REVIEW  |
| 25. PROJECT REVIEW          | 26. PROJECT REVIEW  |
| 27. PROJECT REVIEW          | 28. PROJECT REVIEW  |
| 29. PROJECT REVIEW          | 30. PROJECT REVIEW  |
| 31. PROJECT REVIEW          | 32. PROJECT REVIEW  |
| 33. PROJECT REVIEW          | 34. PROJECT REVIEW  |
| 35. PROJECT REVIEW          | 36. PROJECT REVIEW  |
| 37. PROJECT REVIEW          | 38. PROJECT REVIEW  |
| 39. PROJECT REVIEW          | 40. PROJECT REVIEW  |
| 41. PROJECT REVIEW          | 42. PROJECT REVIEW  |
| 43. PROJECT REVIEW          | 44. PROJECT REVIEW  |
| 45. PROJECT REVIEW          | 46. PROJECT REVIEW  |
| 47. PROJECT REVIEW          | 48. PROJECT REVIEW  |
| 49. PROJECT REVIEW          | 50. PROJECT REVIEW  |
| 51. PROJECT REVIEW          | 52. PROJECT REVIEW  |
| 53. PROJECT REVIEW          | 54. PROJECT REVIEW  |
| 55. PROJECT REVIEW          | 56. PROJECT REVIEW  |
| 57. PROJECT REVIEW          | 58. PROJECT REVIEW  |
| 59. PROJECT REVIEW          | 60. PROJECT REVIEW  |
| 61. PROJECT REVIEW          | 62. PROJECT REVIEW  |
| 63. PROJECT REVIEW          | 64. PROJECT REVIEW  |
| 65. PROJECT REVIEW          | 66. PROJECT REVIEW  |
| 67. PROJECT REVIEW          | 68. PROJECT REVIEW  |
| 69. PROJECT REVIEW          | 70. PROJECT REVIEW  |
| 71. PROJECT REVIEW          | 72. PROJECT REVIEW  |
| 73. PROJECT REVIEW          | 74. PROJECT REVIEW  |
| 75. PROJECT REVIEW          | 76. PROJECT REVIEW  |
| 77. PROJECT REVIEW          | 78. PROJECT REVIEW  |
| 79. PROJECT REVIEW          | 80. PROJECT REVIEW  |
| 81. PROJECT REVIEW          | 82. PROJECT REVIEW  |
| 83. PROJECT REVIEW          | 84. PROJECT REVIEW  |
| 85. PROJECT REVIEW          | 86. PROJECT REVIEW  |
| 87. PROJECT REVIEW          | 88. PROJECT REVIEW  |
| 89. PROJECT REVIEW          | 90. PROJECT REVIEW  |
| 91. PROJECT REVIEW          | 92. PROJECT REVIEW  |
| 93. PROJECT REVIEW          | 94. PROJECT REVIEW  |
| 95. PROJECT REVIEW          | 96. PROJECT REVIEW  |
| 97. PROJECT REVIEW          | 98. PROJECT REVIEW  |
| 99. PROJECT REVIEW          | 100. PROJECT REVIEW |

Critical review of Project Improvement Initiative – (Acquisition and Project Management Corrective Action Plan)



Improved reporting – evaluate current reporting needs and methods and implement better methods for the future



**EM Environmental Management**

safety ❖ performance ❖ cleanup ❖ closure

# FY 2009 Omnibus, Recovery Act, and FY 2010 Request

| Site                                       | (dollars in thousands) | FY 2009 Original<br>Appropriation <sup>a/</sup> | FY 2009<br>ARRA <sup>a/</sup> | FY 2010<br>Congressional<br>Request <sup>a/</sup> |
|--|------------------------|---|-------------------------------|---|
| Argonne National Laboratory                |                        | 29,479  | 98,500                        | 0   |
| Brookhaven                                 |                        | 8,433   | 42,355                        | 12,614  |
| Energy Technology Engineering Center       |                        | 15,000  | 54,175                        | 13,000  |
| Fernald                                    |                        | 2,100   | 0                             | 0   |
| Hanford                                    |                        | 1,057,496                                       | 1,634,500                     | 993,503   |
| Idaho                                      |                        | 489,239   | 467,875                       | 411,168   |
| Los Alamos National Laboratory             |                        | 224,639   | 211,775                       | 189,000   |
| Miamisburg                                 |                        | 35,331  | 19,700                        | 33,243  |
| Moab                                       |                        | 40,699  | 108,350                       | 30,671  |
| Nevada                                     |                        | 76,741  | 44,325                        | 65,674  |
| Oak Ridge                                  |                        | 498,688   | 755,110                       | 411,168   |
| Office of River Protection                 |                        | 1,009,943                                       | 326,035                       | 1,098,000   |
| Paducah                                    |                        | 169,947   | 78,800                        | 144,857   |
| Portsmouth                                 |                        | 240,715   | 118,200                       | 319,663   |
| Savannah River                             |                        | 1,361,479                                       | 1,615,400                     | 1,342,013   |
| SPRU                                       |                        | 18,000  | 31,775                        | 15,000  |
| Stanford Linear Accelerator Center         |                        | 4,883   | 7,925                         | 4,600   |
| Waste Isolation Pilot Plant                |                        | 240,591   | 172,375                       | 224,981   |
| West Valley Demonstration Project          |                        | 66,900  | 73,875                        | 59,933  |
| Tuba City                                  |                        | 5,000   | 0                             | 0   |
| SEFOR                                      |                        | 1,903   | 0                             | 0   |
| Completed Sites Administration and Support |                        | 14,309  | 0                             | 9,425   |
| Program Direction                          |                        | 309,807   | 30,000                        | 355,000   |
| Program Support                            |                        | 33,930  | 40,000                        | 34,000  |
| Uranium Thorium Reimbursement              |                        | 10,000  | 68,950                        | 0   |
| Technology Development & Deployment        |                        | 32,320  | 0                             | 55,000  |
| Other / Adjustments                        |                        | -6,000  | 0                             | 7,212   |
| <b>Total, Environmental Management</b>     |                        | <b>5,991,572</b>                                | <b>6,000,000</b>              | <b>5,829,725</b>                                  |

<sup>a/</sup> Funding for Safeguards and Security activities distributed across sites.

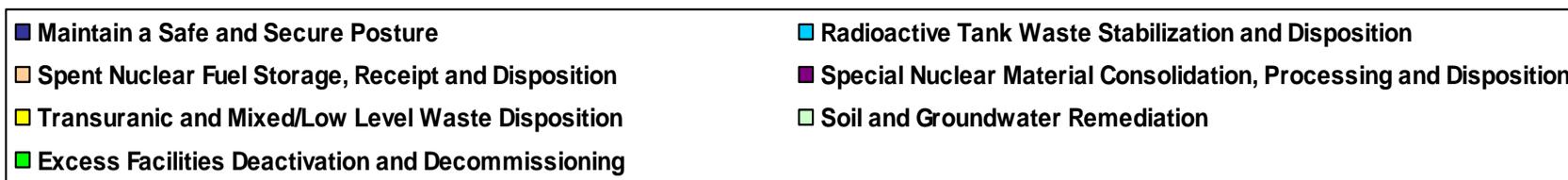
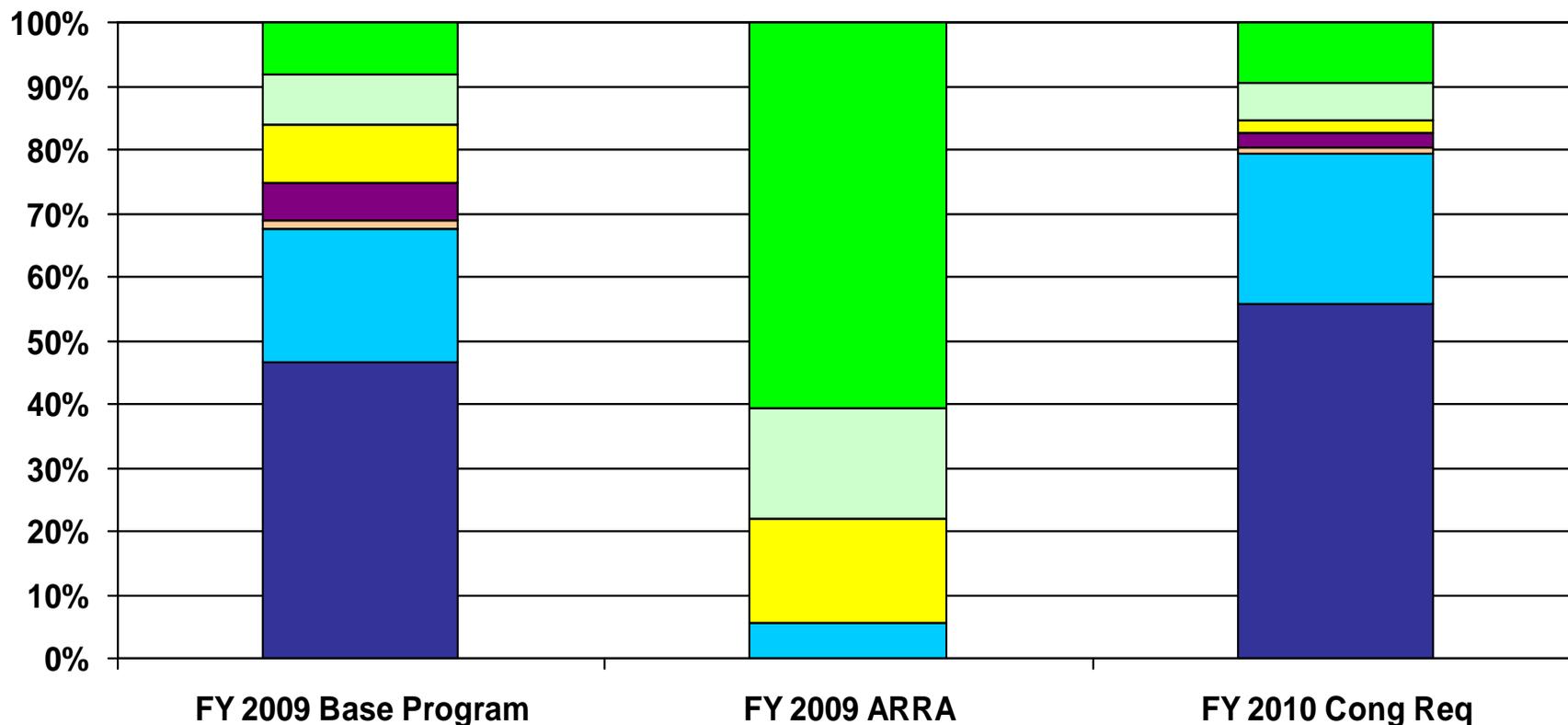


**EM Environmental Management**

safety ❖ performance ❖ cleanup ❖ closure

[www.em.doe.gov](http://www.em.doe.gov)

# Comparison of Recovery Act and Base Program Work Scope



# Recovery Act: Sound Business Practices and Investments

## EM Highlights So Far



- Over 9,650 jobs created or preserved
- More than 99% of Recovery Act funds have been allocated to sites
- Modifications issued to 29 existing contracts
- Nearly \$5.4 billion obligated to contracts for EM Recovery projects
- Over \$427 million spent on Recovery work
- Monthly monitoring of project execution and performance
- Active engagement with stakeholders and regulators

- Scope that is most readily accelerated
  - Soil and groundwater remediation
  - Radioactive solid waste disposition
  - Facility decontamination & decommissioning
- “Shovel Ready”
  - Fully defined cost, scope and schedule
  - Established regulatory framework
  - Proven technology
  - Proven performance and safety standards
  - Existing contract vehicles
- Focus on EM completion and footprint reduction
- Recovery Act funding will accelerate approximately 55 compliance milestones
- Demonstrate EM’s increased commitment to deliver quality work on schedule and within cost

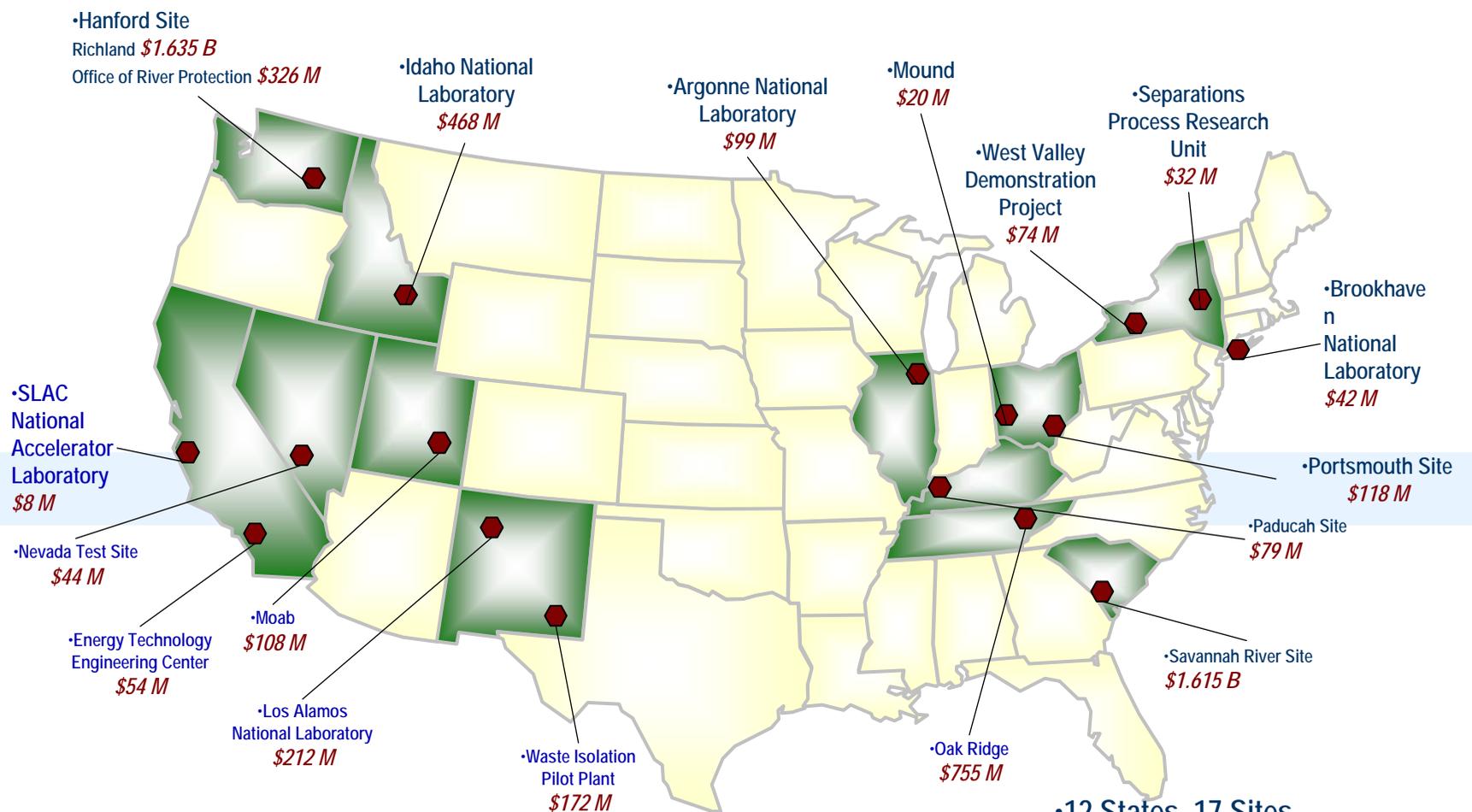


**EM** Environmental Management

safety ❖ performance ❖ cleanup ❖ closure

[www.em.doe.gov](http://www.em.doe.gov)

# \$6 Billion: Making a Difference in Communities Across the Country



•12 States, 17 Sites  
 Uranium/Thorium \$69 M  
 Management & Oversight \$70 M



**EM Environmental Management**

safety ❖ performance ❖ cleanup ❖ closure

# *EM Strategy*

- Focus on reducing risk while maximizing compliance with regulatory commitments
- Improve construction project performance
- Strengthen Technology Development
  - Focus on high-risk activities
  - Potential to significantly reduce life-cycle cost of cleanup
- Continue to evaluate programmatic alternatives
  - Evaluate future execution scenarios
  - Identify opportunities for additional investment opportunities
  - Optimize out year planning



# *EM International Objectives: Continuing 15 Years of Cooperation*

- **Purpose**
  - Study mutual waste management challenges and continue cooperation producing tangible results in the cleanup efforts
- **Current projects**
  - Focus on high-level waste and EM site cleanup needs
- **Strategy**
  - Focus cooperation on EM's accelerated closure mission
  - Leverage International expertise and experience
  - Continue relationships with leading international scientists
  - Promote the EM mission through transformational solutions
- **Explore collaborative technology development with international partners**
  - UK - Nuclear Decommissioning Authority on glass formulation and vitrification technology, and nuclear materials and facility management
  - Russia - glass, groundwater & soils data
  - South Korea - melter technology
  - Potential collaborations with "other" countries
- **Maintain strong international cooperative ties with the IAEA Waste Safety and Waste Technology Sections and the International Decommissioning Network (IDN)**
- **Lead the U.S. government's technical implementation of the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management**
- **Maintain ties to Nuclear Energy Agency's (NEA)**

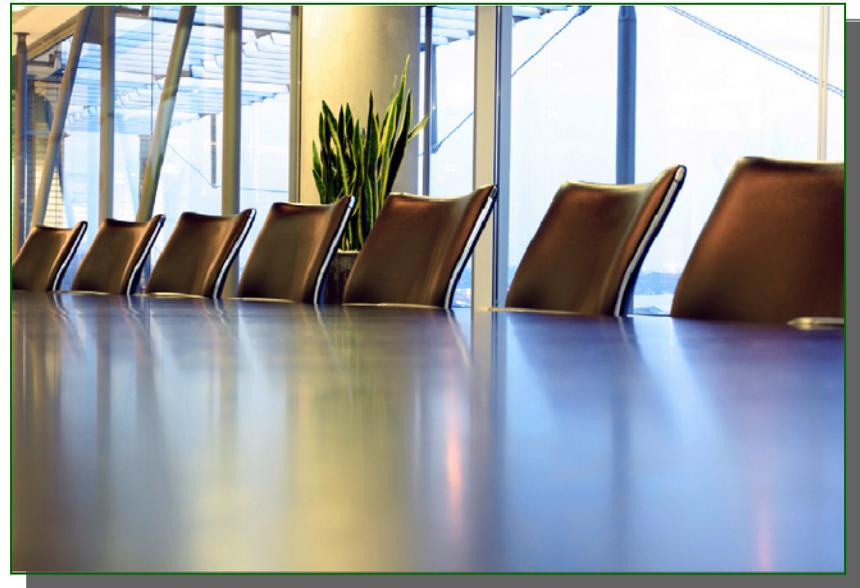


**EM** *Environmental Management*

safety ❖ performance ❖ cleanup ❖ closure

# *Focus Areas for EMAB*

- Acquisition, Project Management, and Quality Assurance
- American Recovery and Reinvestment Act
- Energy Parks Initiative
- Human Capital



**EM** *Environmental Management*

safety ❖ performance ❖ cleanup ❖ closure

# The Challenge: Maintaining Momentum



- Safely conducting work
- Managing performance-based projects with life cycles over several decades
- Producing results with robust project management practices
- Applying first-of-a-kind technologies
- Achieving footprint reduction and near-term completions
- Managing and maintaining an “able and stable” workforce
- Using Recovery Act funds to create sustainable environmental cleanup jobs, with lasting economic benefits



**EM** Environmental Management

safety ❖ performance ❖ cleanup ❖ closure