



U.S. DEPARTMENT OF  
**ENERGY**



# Office of Environmental Management Program Update

*Dr. Inés Triay*  
**Assistant Secretary**  
**Environmental Management**

*Environmental Management Site-Specific Advisory Board*  
**Public Meeting**  
**April 28, 2010**



**EM** *Environmental Management*

safety ❖ performance ❖ cleanup ❖ closure

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

# *EM Continues Journey to Excellence*

*Our Vision:*

*"EM completes quality work safely, on schedule and within cost, and delivers demonstrated value to the American taxpayer."*



**Assistant Secretary**

**Principal Deputy Assistant Secretary**

**Chief  
Technical  
Officer**

**Chief  
Business  
Officer**



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# EM Mission and Priorities:

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



- Improving project management
- Emphasizing safety, security, compliance
- Treating/disposing of tank wastes
- Storing spent nuclear fuel
- Positioning special nuclear material
- Positioning transuranic and mixed/low-level waste
- Remediating soil and groundwater
- Deactivating and decommissioning (D&D) excess facilities



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# EM SSAB Discussion Topics



- EM Program Goals and Strategies
- EM Commitment to Safety and Compliance
- ARRA Boosts Baseline
- EM SSAB Focus Areas



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# *EM Program Goals and Strategies*

## **PROGRAM GOALS:**

- Risk Reduction
  - Maintain Compliance
    - Inject American Recovery and Reinvestment Act (ARRA) funds
    - Improve Project Performance
  - Establish Strategic Options

## **STRATEGIES:**

- Safety Performance
  - Project Management
    - Management and Leadership Excellence
    - Headquarters and Field Alignment
  - Science and Technology



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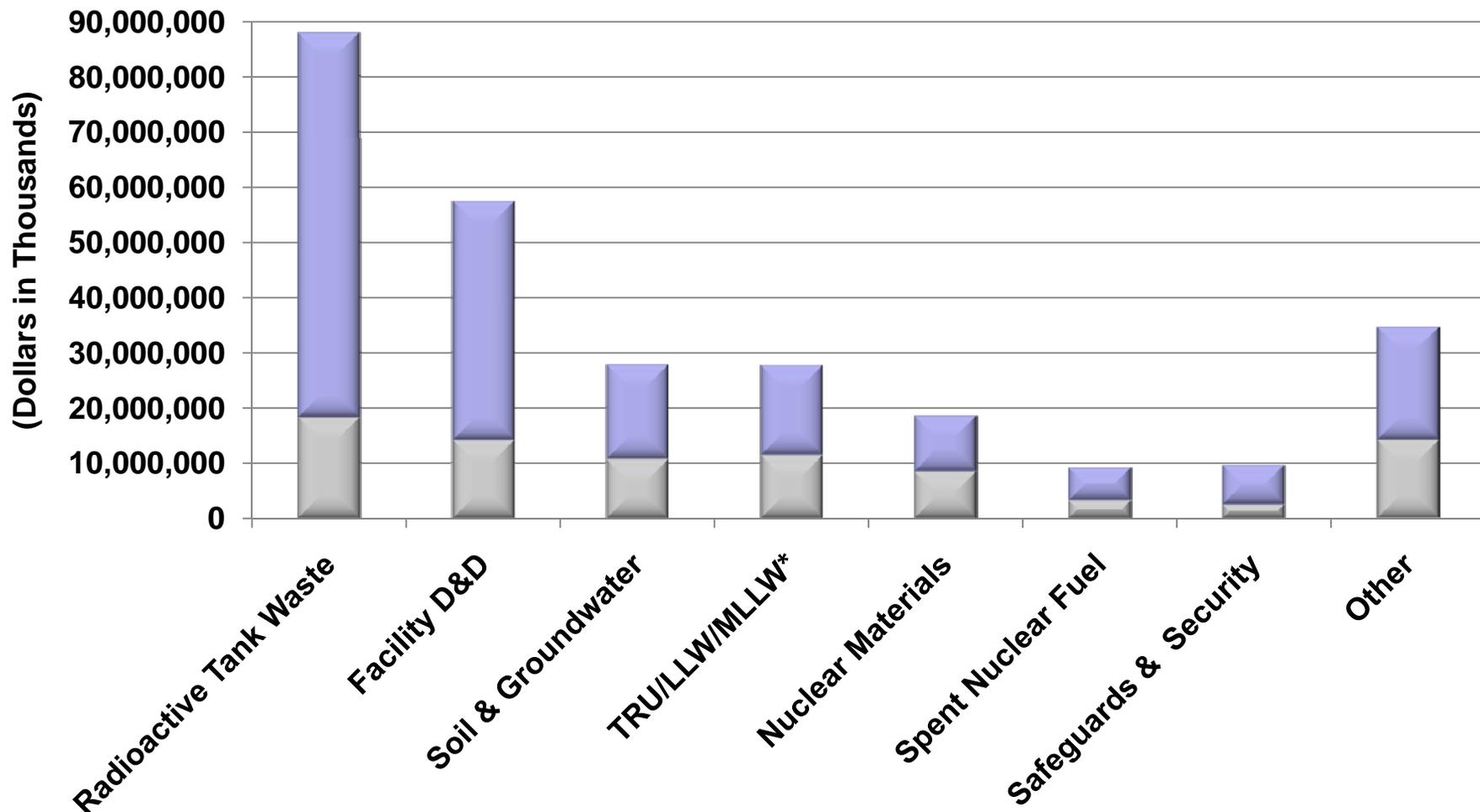
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# Life Cycle Costs By Mission Category

EM Costs by Mission Category (50% Confidence LCC)

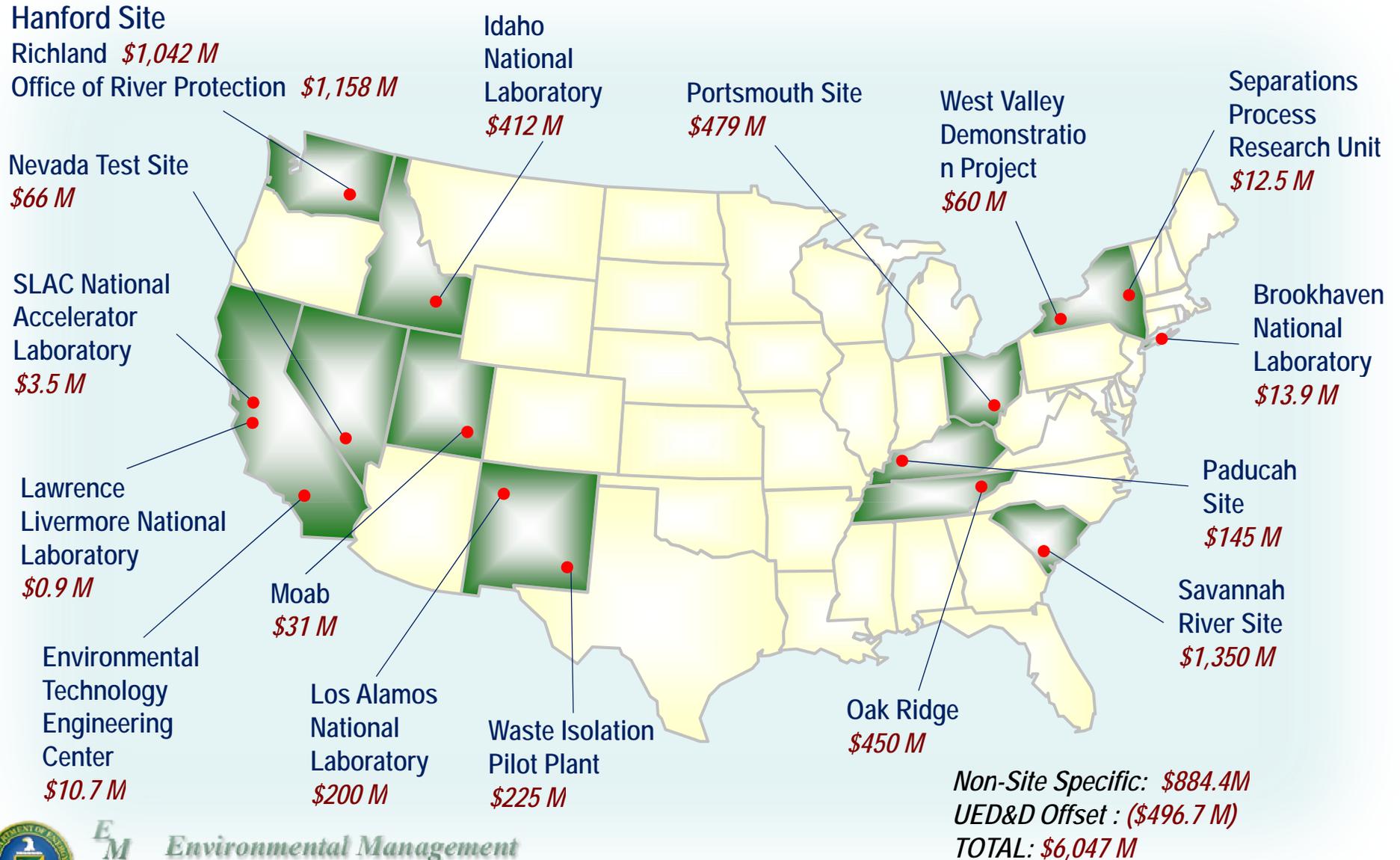
■ FY 1997-2009 ■ Remaining



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# FY 2011 Congressional Request by Site



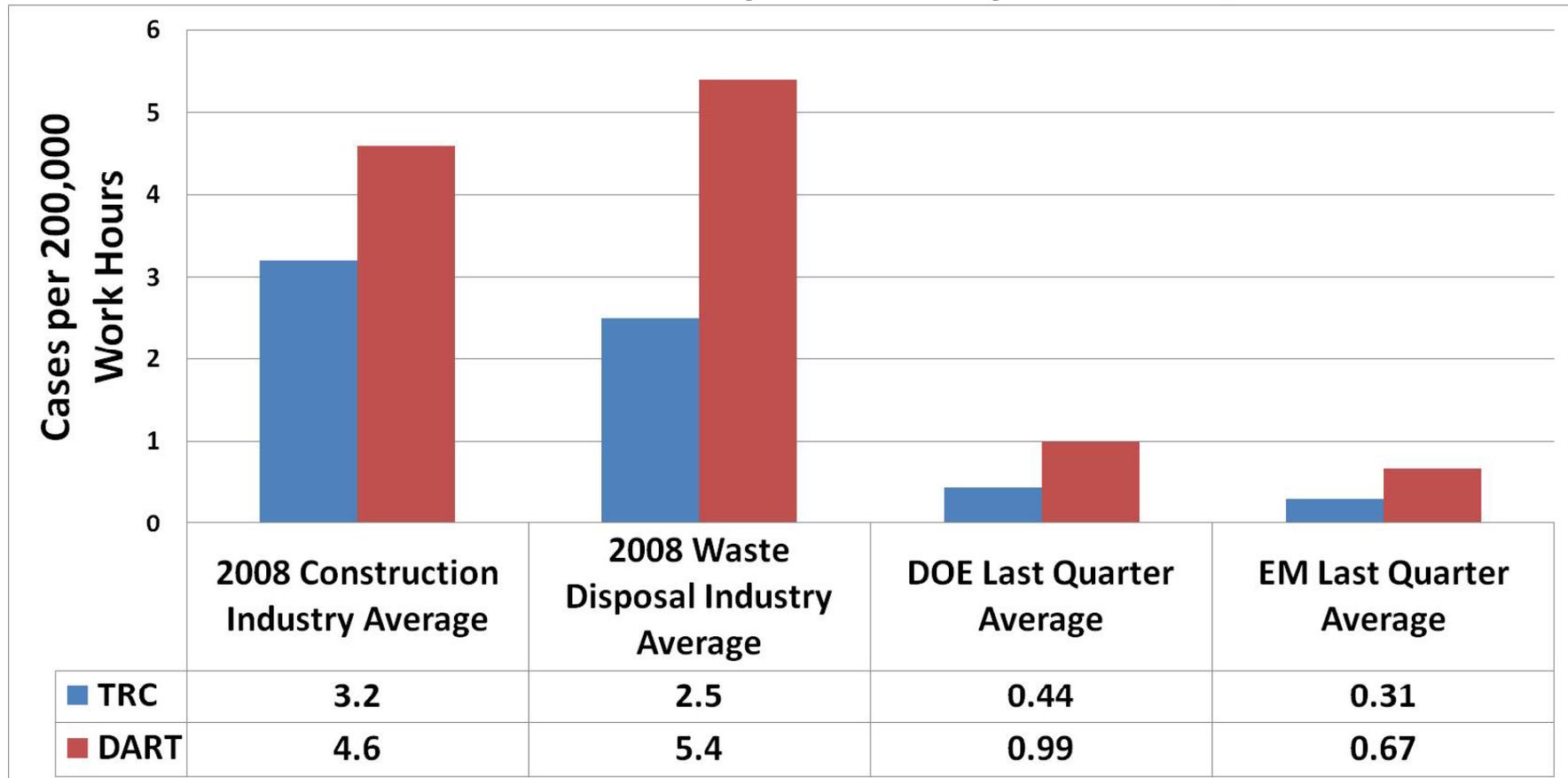
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# EM Aims to Lead in Safety

## DOE / EM / Industry Safety Comparison



**Total Recordable Cases (TRC), Occupational Injury Safety Days Away from work, Restricted, or on job Transfer (DART)**



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# *EM Meets Compliance Agreements*

- Funds activities to maintain a safe and secure posture in the EM complex
- Supports the required TRU waste retrievals at Idaho consistent with the terms of the Idaho Settlement Agreement
- Funds the recently negotiated Tri-Party Agreement settlement with Washington state and 36 other agreements

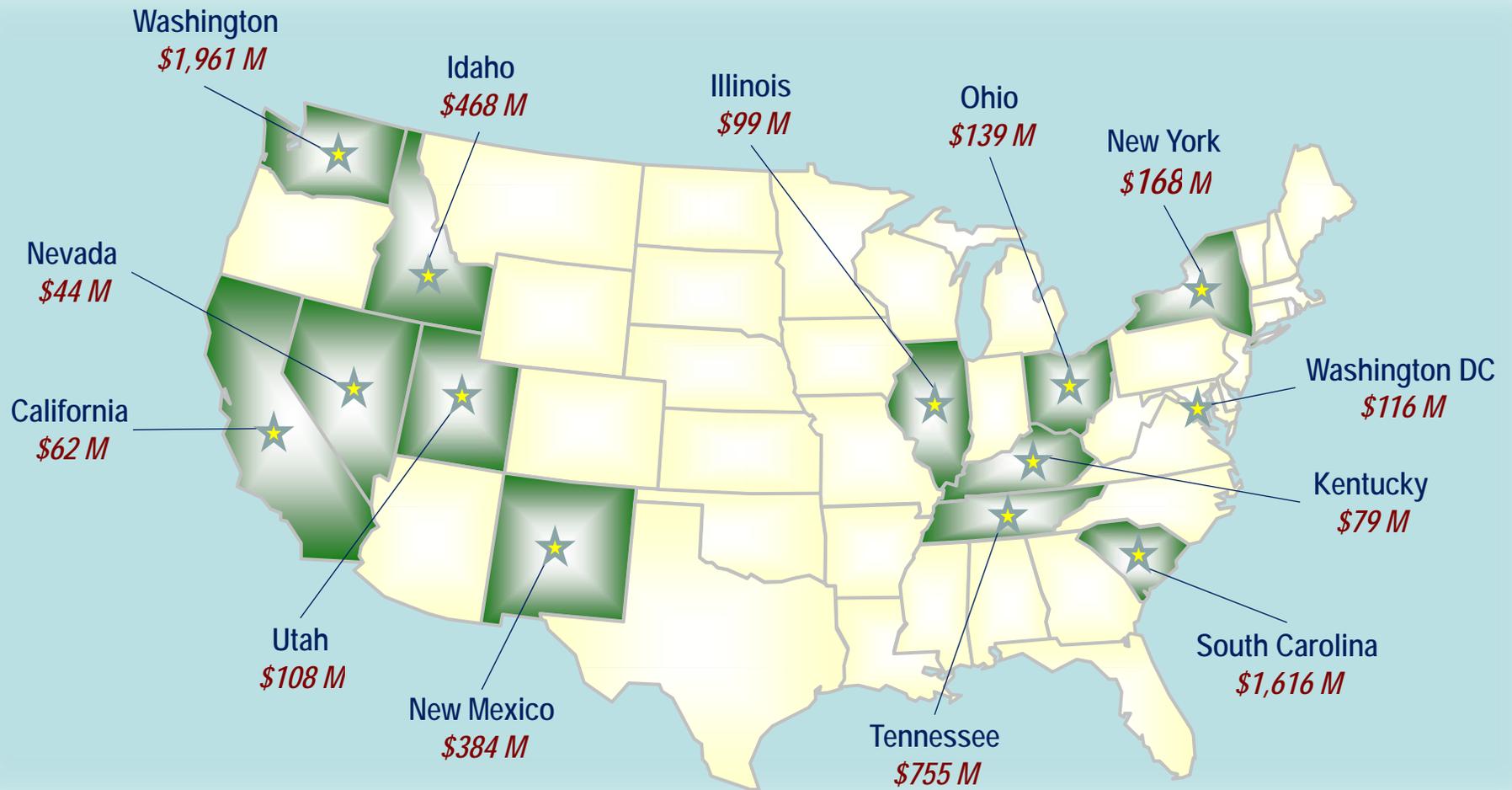


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# ARRA \$6 Billion Makes a Big Difference



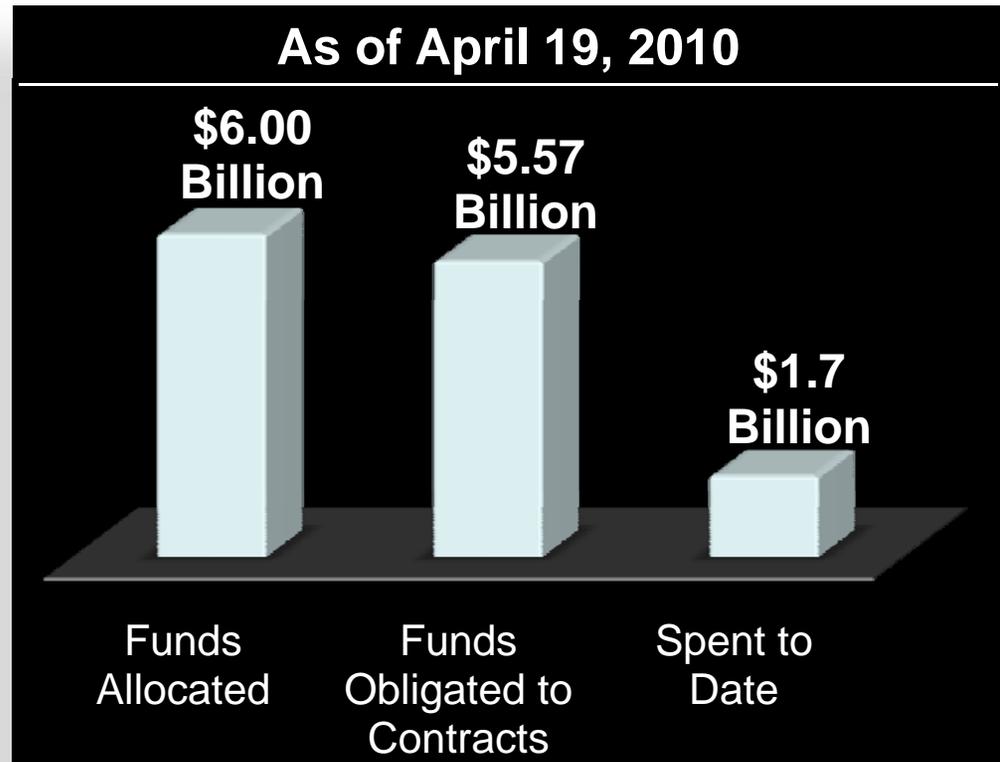
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# Infusion of ARRA Funds

Job creation and environmental cleanup progress



Job Seekers Line Around West Kentucky Community & Technical College Gym



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# Getting the Job Done

Performance Measure	Overall ARRA Goals (Sept. 30, 2011)	March 31, 2010 Plan	Accomplishments (as of Mar. 31, 2010)		
Facility Square Footage Demolished (square feet)	3,144,981	405,636	456,778 (15% of goal)	=	8 football fields 
Demolition Debris and Soil Permanently Disposed (cubic meters)	1,217,177	381,368	277,765 (23% of goal)	=	111 Olympic swimming pools 
Mill Tailings Disposed (tons)	2,004,035	465,155	614,295 (31% of goal)	=	4,266 rail cars  ⇒ 
Contact-Handled Transuranic Waste Processed (certification-ready) (cubic meters)	6,422	1,705	1,864 (29% of goal)	=	8,953 55-gal drums 
Contact-Handled Transuranic Waste Certified for Final Disposal (cubic meters)	9,949	1,922	1,211 (12% of goal)	=	415 TRUPACT IIs (5,817 55-gal drums) (138 shipments) 
Transuranic Waste Inventory Dispositioned (cubic meters)	8,398	744	878 (10% of goal)	=	4,217 55-gal Drums  
Low Level and Mixed Low-Level Waste Permanently Disposed (cubic meters)	72,687	13,069	13,666 (159% of goal)	=	65,640 55-gal drums 



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# Cost Savings Due to ARRA Funding

Site	Life-Cycle Cost Reduction (80%/High)	Cost Avoidance	Total Cost Reduction & Avoidance
Argonne National Laboratory	0	116	116
Hanford (Office of River Protection)	82		82
Hanford (Richland)	2,033		2,033
Idaho	432	110	542
Los Alamos National Laboratory	-8	96	88
Moab	72		72
Nevada Test Site	40		40
Oak Ridge	-96	304	208
Savannah River	1,153		1,153
WIPP	120	2,500	2,620
West Valley	61		61
Small Sites	15		15
<b>TOTAL (\$M)</b>	<b>\$3,903</b>	<b>\$3,126</b>	<b>\$7,029</b>

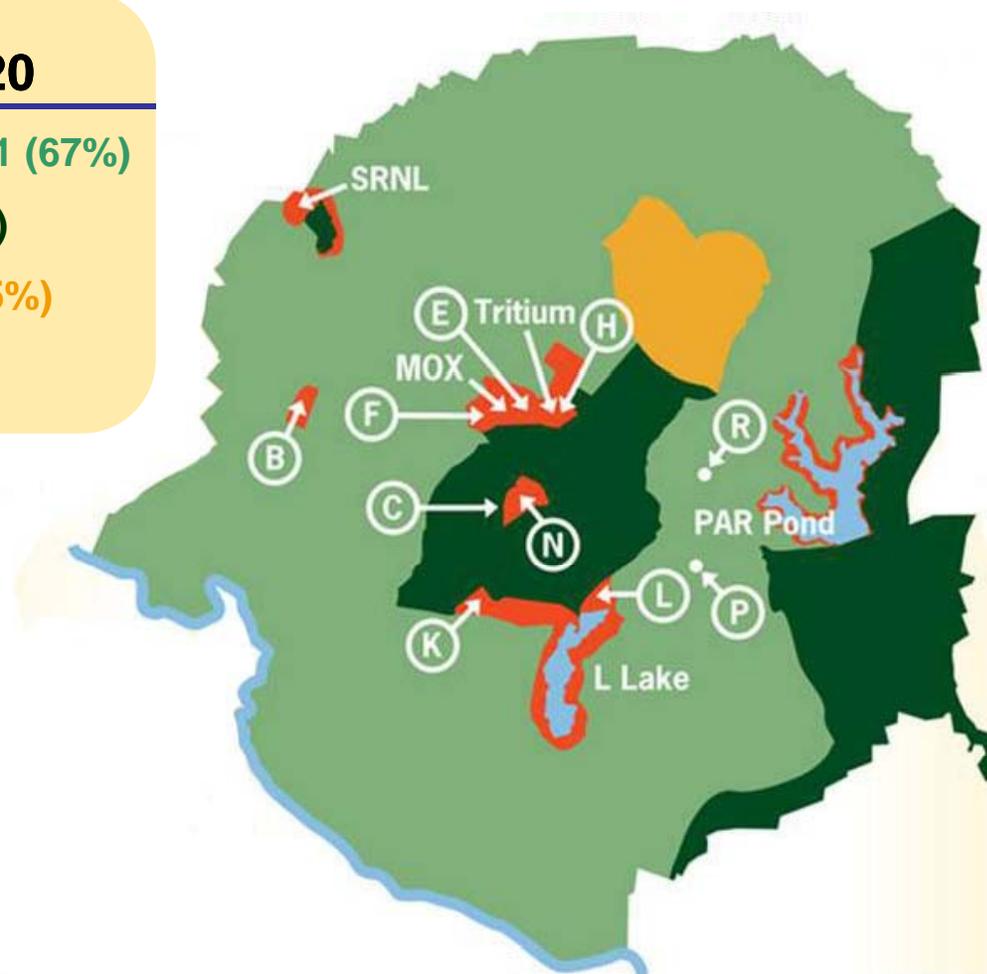


# Footprint Reduction with Recovery Funds

## Savannah River Site

### SRS From 2011 – Post 2020

- ARRA Footprint Reduction by 2011 (67%)
- Footprint Reduction by 2015 (90%)
- Footprint Reduction 2015-2020 (95%)
- Footprint Reduction post 2020

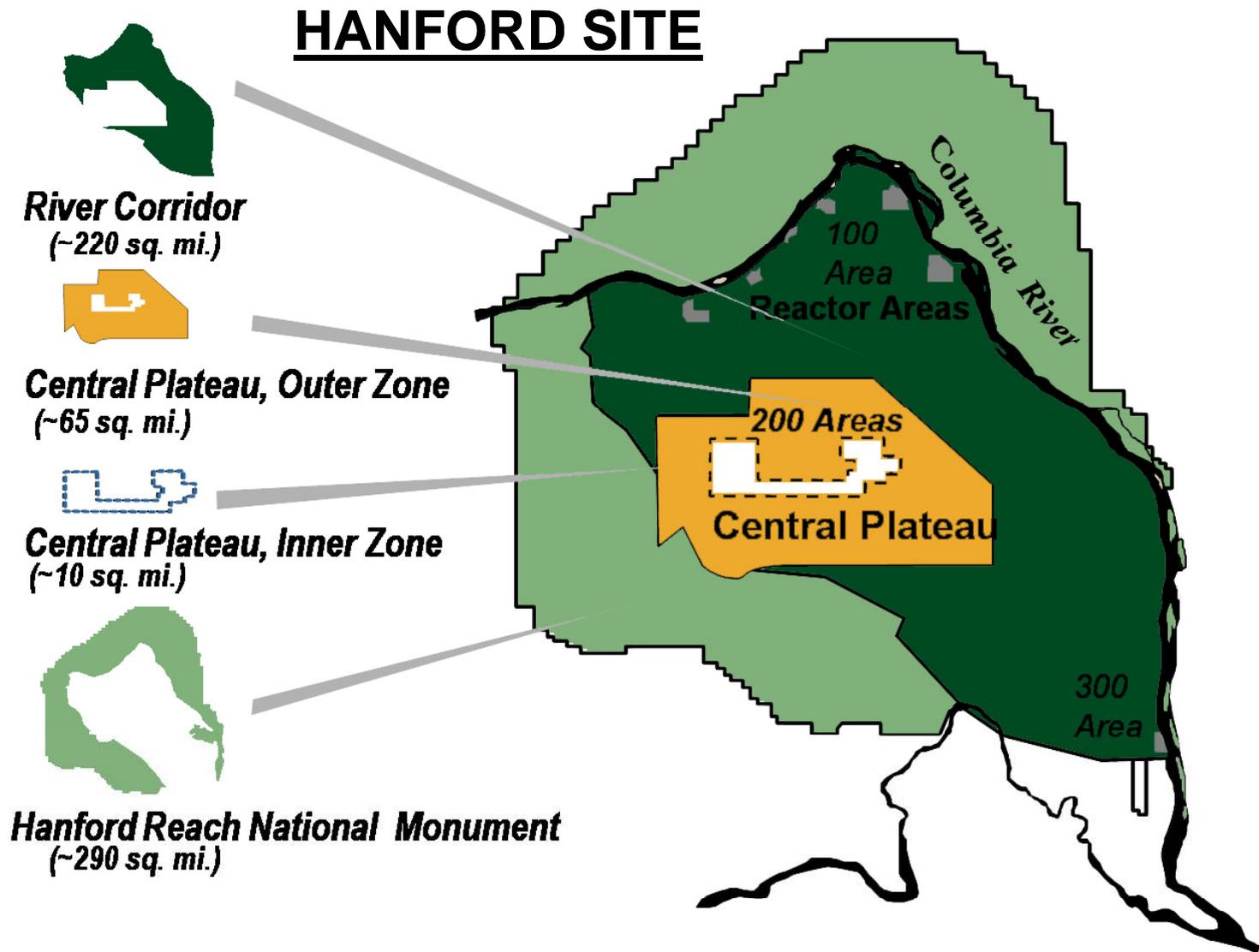


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# Accelerated Footprint Reduction



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# ARRA Sparks Energy Parks Initiative



Recovery Act

Economic Stimulus

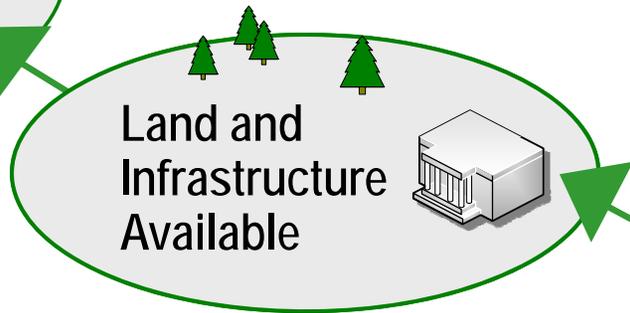
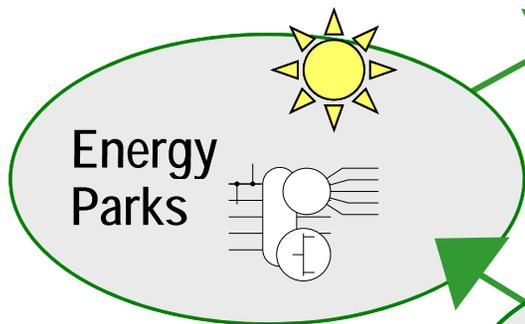


## Public-Private Partnership

DOE Programs, Sites, & National Laboratories; Communities; Private Sector; Other Stakeholders

### Benefits:

- Clean Energy
- Energy Security
- Enhanced Competitiveness



Jobs created



Lifecycle cost reduced



Environment protected



Footprint reduced



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# Site Transition to Energy Parks



## Site Cleanup and Footprint Reduction

## Assets Available for Future Missions

- Land
- Infrastructure
- Energy resources
- Expertise
- Other

## Public-Private Partnership

- DOE Programs, Sites, & National Laboratories
- Communities
- Private Sector
- Other Stakeholders



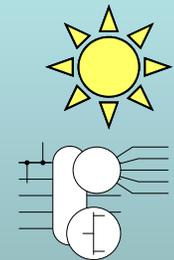
## Benefits:

- Clean Energy
- Reduced Greenhouse Gas Emissions
- Energy Security
- Sustainable Jobs
- Long-term Site Missions
- Clean Energy Infrastructure
- Enhanced Competitiveness

## Energy Parks in DOE Sites and Surrounding Regions

### Develop and Deploy:

- Solar
- Wind
- Biomass
- Geothermal
- Nuclear
- Clean Fossil



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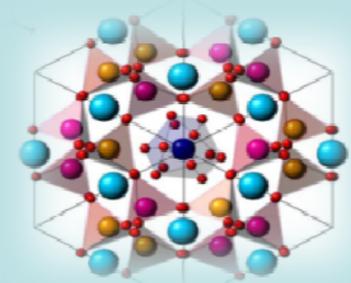
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# EM Waste Disposition Strategies

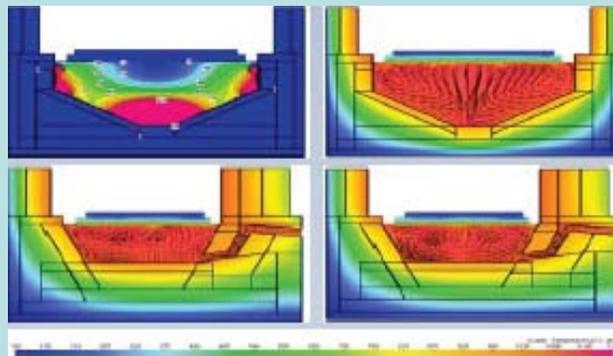
## Alternative Waste Pretreatments



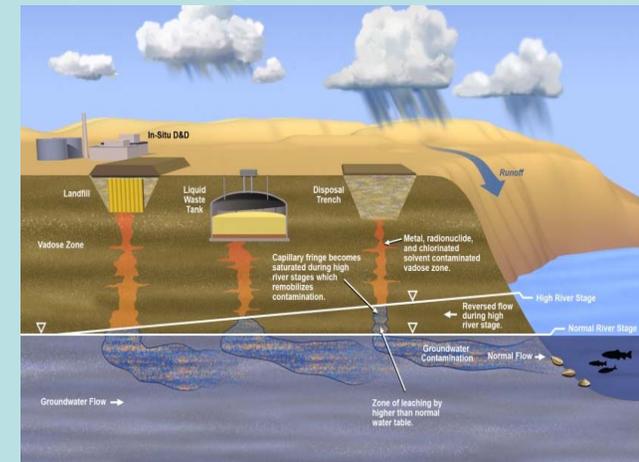
## Increasing Waste Loadings



## Improving Vitrification Capacity



## Advancing Simulation Capability



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# *Public Outreach*

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**EM thanks all of our Stakeholders for their contributions and support over these 20 years**



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# *Four Focus Areas for the SSAB*

- **Budget Priorities**
- **Waste Disposition Strategies**
- **Energy Parks Initiative**
- **Public Outreach**



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# *Backup Slides*

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# Funding by Site (FY 2009-2011)

Site	FY 2009 Approp	FY 2009 ARRA	FY 2010 Cong. Req.	FY 2010 Approp	FY 2011 Request
Argonne	19,479	98,500	-	10,000	-
Brookhaven	8,433	42,355	12,614	15,000	13,861
ETEC	15,000	54,175	13,000	13,000	10,679
Hanford	1,057,496	1,634,500	993,503	1,080,503	1,041,822
Idaho	489,239	467,875	411,168	469,168	412,000
Los Alamos	226,082	211,775	191,938	199,438	200,000
Inhalation Toxicology Lab	272	-	-	-	-
Lawrence Livermore	688	-	1,148	1,148	873
Miamisburg	35,331	19,700	33,243	33,243	-
Moab	40,699	108,350	30,671	39,000	31,000
Nevada	76,741	44,325	65,674	65,674	66,000
Oak Ridge	498,688	755,110	411,168	436,168	450,000
River Protection	1,009,943	326,035	1,098,000	1,098,000	1,158,178
Paducah	169,947	78,800	144,857	172,127	145,000
Portsmouth	240,715	118,200	319,663	303,307	479,035
Savannah River	1,361,479	1,615,400	1,342,013	1,342,013	1,349,863
SPRU	18,000	51,775	15,000	15,000	12,500
SLAC	4,883	7,925	4,600	4,600	3,526
WIPP	240,591	172,375	224,981	234,981	225,000
West Valley	68,300	73,875	59,933	59,933	60,000
Other	38,631	-	12,551	16,551	6,375
Program Direction	309,807	30,000	355,000	345,000	323,825
Program Support	33,930	-	34,000	34,000	25,143
Ur/Th Reimbursement	10,000	68,950	-	-	-
TD&D	31,415	-	55,000	20,000	32,320
D&D Fund Deposit	463,000	-	463,000	463,000	496,700
Unallocated	-	20,000	-	-	-
<b>Subtotal, EM</b>	<b>6,468,789</b>	<b>6,000,000</b>	<b>6,292,725</b>	<b>6,470,854</b>	<b>6,543,700</b>
UED&D Fund Offset:	(463,000)	-	(463,000)	(463,000)	(496,700)
Domestic Utility Fee Offset:	-	-	(200,000)	-	-
Defense Prior Year Offset:	(4,197)	-	-	-	-
Non-Def Prior Year Offset:	(925)	-	-	-	-
Transfer from Science:	(10,000)	-	-	-	-
<b>Total, EM</b>	<b>5,990,667</b>	<b>6,000,000</b>	<b>5,629,725</b>	<b>6,007,854</b>	<b>6,047,000</b>

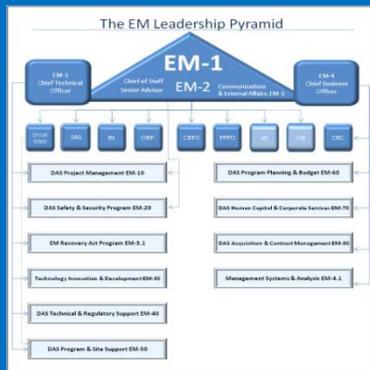


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# EM Focus Areas for Improvement



Senior EM leadership commitment to improvement



Construction only after 90% design



Enhanced Project Management and Oversight Staffing



Restructuring the EM portfolio



Cross-functional project peer reviews based on Office of Science model



Verify funding prior to approving capital asset project baselines



Independent cost estimates early in the life of a project with improved tools



Improved project management information systems and reporting



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# Corporate Performance Metric Life-Cycle Chart

Completions through FY 2011



## Legend

 EM Actuals to Date (including FY 2009 Actuals for both ARRA and BASE)

 FY 2010 and FY 2011 Targets - BASE

 FY 2010 and FY 2011 Targets - ARRA

# EM Challenge: Maintaining Clean Up Progress

- 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



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