

Solving Cleanup Challenges Through Risk Reduction



***FY 2008
Budget
Request***



EM Environmental Management

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Solving Cleanup Challenges Through Risk Reduction

EM Program Priorities

- Continue to focus on safe, cost-effective prioritized risk reduction and cleanup
- Implement a robust project management system and acquisition strategies that promote performance and efficiency
- Strive for an organization with industry partners that recognizes professional competence and yields high performance



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EM Priorities In The FY 2008 Budget Request



- Conduct safe operations



- Fully establish the disposition capability for radioactive liquid tank waste, special nuclear materials, and spent nuclear fuel



- Dispose of contact-handled and remote-handled transuranic waste and low-level radioactive waste



- Continue to remediate higher risk contaminated soil and groundwater



- Decontaminate and decommission facilities no longer needed



- Support post-closure benefits and liability requirements



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FY 2008 Request vs. FY 2007 Request

Site	(Dollars in Thousands)		
	FY 2007 Request ^{a/}	FY 2008 Request ^{a/}	\$ Change
Carlsbad	227,042	234,275	+7,233
Idaho	529,778	520,019	-9,759
Oak Ridge	509,481	444,005	-65,476
Paducah Project Office	140,483	134,042	-6,441
Portsmouth Project Office	248,277	248,279	+2
Richland	958,828	1,017,570	+58,742
River Protection	986,196	985,776	-420
Savannah River	1,296,912	1,406,271	+109,359
NNSA Sites	244,776	284,612	+39,836
Closure Sites	358,974	80,632	-278,342
West Valley Demonstration Project	75,000	55,995	-19,005
All Other Sites	86,674	69,575	-17,099
Headquarters Operations	144,228	152,911	+8,683
Technology Development & Deployment	21,389	21,389	+0
Total, Environmental Management	5,828,038	5,655,351	-172,687

^{a/}Funding for Program Direction and Safeguards and Security activities distributed across sites.

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Key Program Issues

- Lifecycle costs
 - New work scope and increased quantities
 - Optimistic assumptions
 - Technical
 - Regulatory
 - Performance vs. plan
 - Post-closure liabilities
- Risk-based priorities and regulatory compliance
- Contractor workforce and skills issues



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Management Initiatives

- Maintain and demand highest safety performance
- Assure effective identification and management of risks
 - Performance
 - Dealing with increased scope and requirements
 - Independent reviews – technical, cost, and schedule
- Validate project costs, schedules, and assumptions
- Improve senior management focus on project execution
- Provide additional training for Federal managers and staff to enhance project management, and acquisition skills
- Implement more effective acquisition process
 - Contract type
 - Fee structure
- Ensure real-time feedback and application of lessons learned
- Ensure proper organizational alignment of functions, authorities, and people

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Summary

- With the FY 2008 budget request, EM will continue focusing on safe, cost-effective prioritized risk reduction and environmental cleanup.
- EM is committed to and is implementing several management initiatives to improve performance and results in safety, acquisitions, and project management.
- EM's redesigned website is now available at www.em.doe.gov.



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BACKUP



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EM LEGACY CLEANUP SCOPE		
Material	Primary Locations	Current Disposition Plans
Nuclear Materials		
Enriched Uranium	Idaho, Hanford, Savannah River Site	Blended down to low enrichment material, then used in fabricating fuel for commercial nuclear reactors
Plutonium	Hanford, Savannah River Site, Los Alamos National Laboratory and Lawrence Livermore National Laboratory	Proposed: Immobilization for disposal at a geologic repository
Depleted Uranium	Portsmouth and Paducah	Conversion of uranium hexafluoride into uranium oxide Disposal of uranium oxide offsite as low level waste
Radioactive Liquid Tank Waste		
Liquid Tank Waste	Idaho, Hanford, Savannah River Site, West Valley	Separation into low activity and high activity waste streams Immobilization (vitrification) of high activity waste for disposal at a geologic repository Immobilization of low activity waste for onsite disposal
Liquid Waste Tanks	Idaho, Hanford, Savannah River Site, West Valley	Disposed in place
Spent Nuclear Fuel and Solid Radioactive Waste in Storage		
Spent Nuclear Fuel	Hanford and Savannah River Site	Package in standardized canisters or Multi-Canister Overpacks, or process into High-Level Waste for disposal at a geologic repository
Transuranic Waste	Multiple Sites	Disposal at Waste Isolation Pilot Plant
Low-Level Waste	Multiple Sites	Disposal on site, Hanford, Nevada Test Site and commercial disposal sites
Contaminated Facilities, Soil and Groundwater		
Nuclear Facilities	Multiple Sites	Decommissioned to the appropriate end state: demolished; entombed; long term surveillance and maintenance; and deactivated/decontaminated for re-use
Radioactive Facilities	Multiple Sites	
Industrial Facilities	Multiple Sites	
Geographic Sites	Multiple Sites	
Cleanup to regulatory standards for other uses		



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Corporate Performance Measures

	Performance Measure	Projected to be Completed Through FY 2007	Projected to be Completed Through FY 2008	Percent Projected to be Completed Through FY 2008	Lifecycle Total	Units
	Plutonium packaged for long-term disposition	Measure Complete		100%	6,314	Number of Containers
	Enriched Uranium packaged for disposition	6,972	7,192	97%	7,413	Number of Containers
	Plutonium and Uranium Residues packaged for disposition	Measure Complete		100%	107,828	kg Bulk
	Depleted Uranium and Uranium packaged for disposition	11,855	17,116	2%	698,243	Metric Tons
	Liquid Waste eliminated	.7 million	1.4 million	2%	88 million	gallons
	Liquid Waste Tanks closed	5	9	4%	239	Number of tanks
	High Level Waste Packaged for final disposition	2,675	2,861	14%	20,004	Number of Containers
	SNF Packaged for final disposition	2,127	2,127	88%	2,417	MT Heavy Metal
	Transuranic Waste disposed	43,701	54,466	40%	135,353	cubic meters
	Low Level /Mixed Low Level Waste disposed	987,249	1,004,386	76%	1,316,619	cubic meters
	Material Access Areas (MAAs) eliminated	11	11	85%	13	Number of MAAs
	Nuclear Facility D&D Completions	81	82	20%	407	Number of Facilities
	Radioactive Facility D&D Completions	322	337	40%	848	Number of Facilities
	Industrial Facility D&D Completions	1,417	1,560	47%	3,298	Number of Facilities
	Remediation Complete	6,532	6,781	65%	10,470	Number of Release Sites
	Geographic Sites Eliminated	86	89	82%	108	Number of Sites



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FY 2006 - 2008 Cleanup Completions

FY 2006

- Rocky Flats Site (Colorado)
- Kansas City Plant (Missouri)
- Lawrence Livermore National Laboratory - Main Site (California)

FY 2007

- Ashtabula Environmental Management Project (Ohio)
- Columbus Environmental Management Project (Ohio)
- Fernald Environmental Management Project (Ohio)
- Lawrence Berkeley National Laboratory (California)

FY 2008

- Miamisburg Environmental Management Project (Ohio) ^{a/}
- Inhalation Toxicology Laboratory (New Mexico)
- Pantex Plant (Texas)
- Lawrence Livermore National Laboratory – Site 300 (California)

a/ Physical completion in 2007



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FY 2008 Request – Summary by State

\$ in thousands

State	EM FY 2008 Congressional Request ^{a/}	DOE FY 2008 Congressional Request ^{b/}
California	28,110	2,192,198
Colorado	6,150	542,523
Idaho	520,019	1,116,147
Illinois	2,437	954,267
Kentucky	143,473	151,173
Nevada	85,995	849,931
New Mexico	384,273	4,082,942
New York	107,279	1,009,256
Ohio	313,330	371,527
South Carolina	1,406,271	2,178,115
Tennessee	444,005	2,408,118
Texas	12,411	685,409
Utah	23,952	68,067
Washington	2,003,346	2,309,105
Washington, DC	174,300	3,996,533
Total	5,655,351	22,915,311
^{a/} EM State Distribution includes funding for Program Direction and Safeguards and Security activities.		
^{b/} Excludes states with no EM presence.		

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FY 2008 Budget Request Summary

- Carlsbad
 -  Contact-handled and remote-handled TRU waste disposal
- Idaho
 -  Sodium-bearing tank waste treatment facility construction
 -  SNF transfers from wet-to-dry storage
 -  Solid waste disposition
 -  Nuclear and non-nuclear facility D&D
 -  Soil and groundwater remediation
- Oak Ridge
 -  U-233 down-blending for disposition
 -  Processing contact- and remote-handled TRU for WIPP disposal
 -  D&D at ETTP
 -  Molten Salt Reactor Experiment remediation and planning for D&D of Bethel Valley
 -  D&D at Y-12
 -  Soil and groundwater remediation



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- Portsmouth
 -  DUF6 conversion facility
 -  D&D of the gaseous diffusion plant
 -  Solid waste disposition
 -  D&D of the gas centrifuge enrichment plant
 -  Soil and groundwater remediation
- Paducah
 -  DUF6 conversion facility
 -  Solid waste treatment and disposal
 -  D&D of the C-410 complex
 -  Soil and groundwater remediation
- River Protection
 -  –Tank Farms and Waste Treatment Plant
- Richland
 -  Disposition of special nuclear material
 -  K-East basin, Central Plateau and River Corridor facility D&D
 -  Soil and groundwater remediation – Groundwater/Vadose Zone
 -  Fast Flux Test Facility D&D
 -  Solid Waste Disposition

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- Savannah River
 -  Salt Waste Processing Facility design and construction
 -  Special nuclear material and spent nuclear fuel processing (H-Canyon)
 -  Plutonium Vitrification Disposition Project design
 -  Nuclear facility D&D
 -  Solid waste disposition
 -  Soil and groundwater remediation
- Closure Sites
 -  Rocky Flats and Ohio site post-closure liabilities
- NNSA Sites
 -  Soil and groundwater remediation: LANL, Nevada, LLNL-300, Pantex
 -  Solid Waste Disposition: Nevada, LANL
 -  Facility D&D: SPRU, LANL
- All Other Sites
 -  Soil and groundwater remediation: BNL, ITL, Moab, SLAC, ANL-E
 -  Facility D&D: BNL, ETEC, ANL-E
- Safeguards and Security



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Ashtabula Closure Project



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Fernald Closure Project

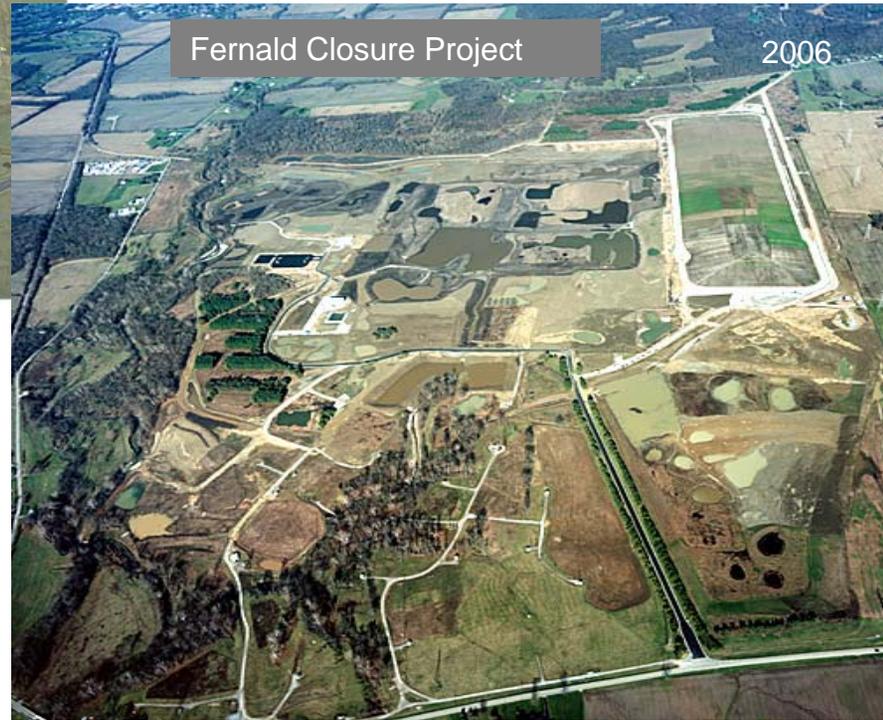
Fernald Closure Project

1987



Fernald Closure Project

2006



Miamisburg Closure Project



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Rocky Flats Site



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Columbus Closure Project



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First Remote-Handled Transuranic Waste Shipment to Waste Isolation Pilot Plant



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