



U.S. DEPARTMENT OF
ENERGY



2010 Congressional Nuclear Cleanup Caucus

*Office of Environmental Management
FY 2011 Budget Request*

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Assistant Secretary
Office of Environmental Management

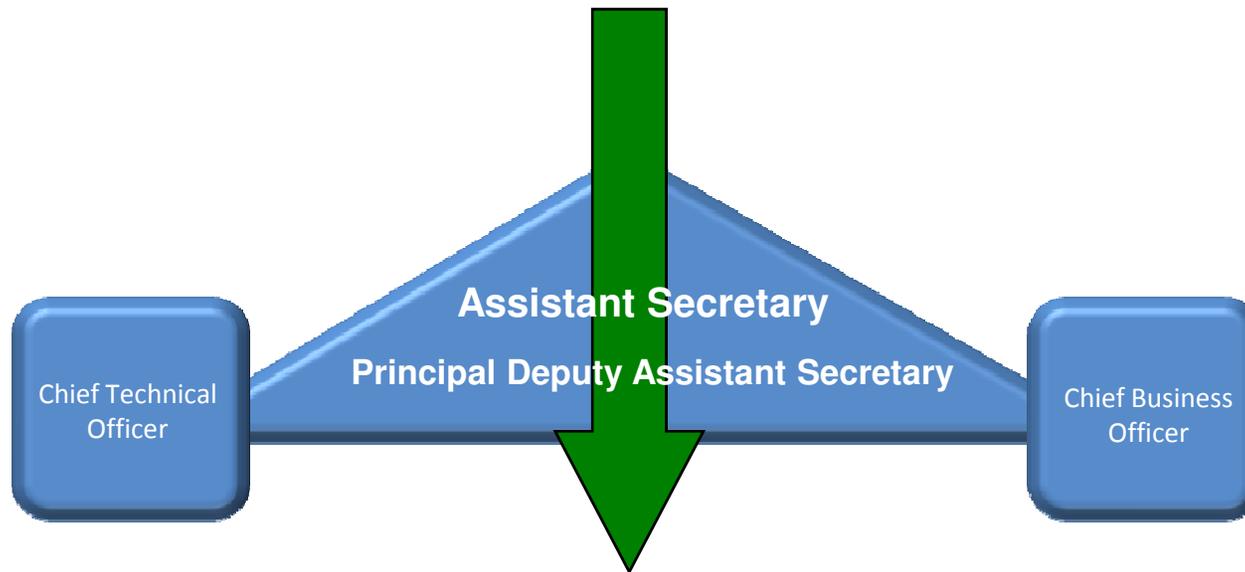


EM *Environmental Management*

safety ❖ performance ❖ cleanup ❖ closure

www.em.doe.gov

EM is embarked on a Journey to Excellence



Our Vision:
“EM completes quality work safely, on schedule and within cost and delivers demonstrated value to the American taxpayer.”



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.”



- Activities to maintain a safe, secure, and compliant posture in the EM complex
- Radioactive tank waste stabilization, treatment, and disposal
- Spent nuclear fuel storage, receipt, and disposition
- Special nuclear material consolidation, processing, 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

EM Program Goals

- Risk Reduction
 - Ensure the safety and health of the public and the workers
 - Protect the environment
 - Reduce the EM footprint by 90% by 2015
- Maintain Compliance
 - 37 compliance agreements with state and federal regulatory agencies
 - Complete building the capability for dispositioning tank waste, nuclear materials, and spent nuclear fuel
- EM American Recovery and Reinvestment Act Goals
 - Thousands of jobs created or saved
 - Reduce the EM footprint by 40% by 2011
- Improve Project Performance
 - Improve construction project performance
 - Deliver all projects on time and within cost
 - Get EM projects removed from the GAO High Risk List
- Establish strategic options for Special Nuclear Materials, Spent Nuclear Fuel, Radioactive Tank Waste, Groundwater and Excess Facilities not currently in the EM portfolio
 - Overall objective is to reduce life-cycle costs and shorten the period of program execution



EM Strategic Goals

- Improve Safety Performance with the goal of zero accidents/incidents
- Improve Project Management
 - Restructure the project portfolio
 - Adapt the Office of Science construction project model to EM
 - Construction Project Review, front end planning; appropriate pricing and contingency
 - Establish Performance Metrics for EM operating projects
 - Align project and contract management
 - Streamline the acquisition process
- Achieve Excellence in Management and Leadership with the objective of making EM an employer of choice in the federal government
- Align Headquarters and Field Operations in order to streamline decision making and improve efficiency
- Utilize Science and Technology to optimize the efficiency of tank waste, excess nuclear materials, spent nuclear fuel and groundwater treatment and disposition
 - Evaluate programmatic alternatives to smartly reduce the cost of the program and period of execution



Procurement and Contract Management Initiative

- Expected results: develop specific actions by EM and contractors to fundamentally improve performance
- Approach
 - EM-wide survey to key Federal and contractors to identify specific contract management issues and barriers
 - Two targeted workshops: one for key contract executives (March 3) and one for key EM contract managers (March 4) based on survey results to address:
 - What can contractors do to avert performance issues?
 - What can the Federal side do to improve awareness and vigilance?
 - Integrated report developed on actions to be taken by EM and contractors to immediately improve contract performance
 - Follow on vigilance to ensure that all actions are implemented
- Supports the Assistant Secretary's goal to:
 - Improve construction project performance;
 - Deliver all projects on time and within cost; and
 - Get EM projects removed from the GAO High Risk List



Program Status

- Establishment of the Environmental Management program
 - Result of Cold War legacy
 - Third largest liability to the United States government and taxpayer
 - Single largest environmental project in the world
- EM legacy footprint
 - Past: 2 million acres at 107 sites in 35 states
 - Projected for end of FY 2011: ~ 450 square miles at 14 sites in 11 states
- EM is well positioned for continued success
 - Optimize structure of the portfolio by increasing:
 - Project management focus
 - Operational metrics to ascertain performance
 - Overlay regulatory compliance commitments
 - Best business practices to maximize cleanup progress



20 Years of Progress

- Tank Waste Management
 - Stabilized millions of gallons of radioactive tank waste
 - Completed 9 tank closures (2 tanks at Savannah River; 7 tanks at Idaho)
 - Completed 16 tank retrievals
 - Defense Waste Processing Facility operational in 1996
 - West Valley Demonstration Plant
 - Operational in 1996
 - Produced 275 canisters of vitrified high level waste
 - Completed processing in 2002
 - Construction initiated on three additional tank waste processing facilities
 - Hanford Waste Treatment and Immobilization Plant (2003)
 - Savannah River Salt Waste Processing Facility (2005)
 - Idaho Sodium Bearing Waste Treatment Facility (2007)
- Stabilized 100% of surplus special nuclear materials
 - Consolidated all EM-owned surplus plutonium at the Savannah River Site
- Transferred all spent nuclear fuel from wet to dry storage at Hanford just over (2,100 metric tons)
 - Hanford K-East Basin closed and D&D complete



20 Years of Progress

- Transuranic Waste
 - Waste Isolation Pilot Plant opened in 1999
 - World's only operating deep geologic repository
 - Safely disposed of approximately 64,000 cubic meters of transuranic waste in first 10 years of operation
 - First contact-handled transuranic waste shipment in March 1999 from Los Alamos
 - First remote-handled transuranic waste shipment in January 2007 from Idaho
- Groundwater
 - Treated over 240 square kilometers of contaminated groundwater
 - Stabilized more than 180 contaminated groundwater plumes
 - Hanford—migration to the Columbia River
 - Idaho—Snake River aquifer
- Accelerated completion of two large former weapons production facilities
 - Rocky Flats—50 years earlier, saving ~\$20 billion from original estimate (2005)
 - Fernald—23 years earlier, saving \$200 million from original estimate (2006)



FY 2011 Highlights

- Funds tank waste management and treatment activities across the complex
 - Hanford Waste Treatment and Immobilization Plant (\$740M)
 - to accelerate completion of design
 - Savannah River Salt Waste Processing Facility (\$288M)
 - construction and pre-operations
 - Idaho Sodium Bearing Waste Treatment (\$6.5M)
 - to complete construction activities
 - Tank waste retrievals at Hanford and Savannah River (\$95M)
 - to meet regulatory commitments
- Increased funding at Portsmouth to support accelerated D&D



FY 2011 Highlights

- Increased technology investments
 - Tank Waste Technologies (\$60M)
 - Optimize tank waste disposition resulting in technology insertion points into the tank waste system that will yield significant cost savings and reduce the period of execution
 - Groundwater Remediation (\$25M)
 - Understand and quantify the subsurface flow and contaminant transport behavior in complex geological systems
- Small site completions
 - Brookhaven National Laboratory (\$13.8M)
 - Stanford Linear Accelerator (\$3.5M)
 - Separations Process Research Unit (\$12.5M)
 - General Electric Vallecitos (< \$100K)



Base Program and Recovery Act Corporate Performance Measures

Performance Measure	Units	EM Program - FY 2009			EM Program - FY 2010			EM Program - FY 2011		
		Actuals			Targets			Targets		
		Base Program	ARRA	EM Total	Base Program	ARRA	EM Total	Base Program	ARRA	EM Total
Plutonium packaged for long-term disposition	number of containers	5,089	0	5,089	Measure Complete					
Enriched Uranium packaged for disposition	number of containers	7,629	0	7,629	7,728	0	7,728	7,728	0	7,728
Plutonium or Uranium Residues packaged for disposition	Kg. Bulk	107,828	0	107,828	Measure Complete					
Depleted and Other Uranium packaged for disposition	Metric Tons	14,636	0	14,636	14,636	11,646	26,282	32,186	11,646	43,832
Liquid Waste in Inventory eliminated	thousands of gal.	2,924	0	2,924	3,624	0	3,624	4,424	0	4,424
Liquid Waste Tanks closed	number of tanks	9	0	9	9	0	9	11	0	11
High-Level Waste packaged for final disposition	number of containers	3,070	0	3,070	3,256	0	3,256	3,553	196	3,749
Spent Nuclear Fuel packaged for final disposition	MT of Heavy Metal	2,128	0	2,128	2,128	0	2,128	2,128	0	2,128
Transuranic Waste Dispositioned - Total	cubic meters	63,586	197	63,783	70,245	3,260	73,505	80,006	8,518	88,524
Low-Level/Mixed Low-Level Waste disposed	cubic meters	1,065,098	4,468	1,069,566	1,070,804	24,096	1,094,900	1,080,923	72,080	1,153,003
Material Access Areas eliminated	number of areas	26	0	26	30	0	30	30	0	30
Nuclear Facility Completions	number of facilities	93	8	101	99	19	118	110	37	147
Radioactive Facility Completions	number of facilities	363	6	369	369	43	412	390	87	477
Industrial Facility Completions	number of facilities	1,558	12	1,570	1,623	55	1,678	1,700	98	1,798
Remediation Complete	number of release sites	6,788	3	6,791	6,985	55	7,040	7,181	98	7,279
Geographic Sites Eliminated	number of Geographic sites	88	0	88	89	0	89	90	3	93



Infusion of Recovery Act Funds

- Recovery Act leads to job creation and environmental cleanup progress
 - More than 99% of Recovery Act funds have been allocated to sites
 - \$5.77 billion obligated to contracts for EM Recovery projects
 - Over \$1.1 billion spent on Recovery work as of January 2010
 - Achieved 136% of EM small business contracting goal
 - Total of \$2.3B awarded to small businesses as of September 2009 for all EM
 - Recovery Act Total: \$697M
 - Prime: \$397M
 - Base Program Total: \$1.6B
 - Prime: \$393M
 - Thousands of jobs created or saved



Infusion of Recovery Act Funds

- Recovery Act accomplishments
 - Drives EM footprint reduction
 - 40% by September 2011; ~900 square miles to ~540 square miles
 - Removal of 2 million tons of mill tailings at the Moab site
 - Accelerate disposition of legacy transuranic waste inventories at 11 sites from 2022 to 2015
 - Build out of infrastructure needed to support waste processing operations once construction complete (\$200M SRS; \$326M RL)
- Acceleration of 3 small site completions to FY 2011
 - Brookhaven National Laboratory
 - Stanford Linear Accelerator
 - Separations Process Research Unit



Compliance Status

- Funds activities to maintain a safe and secure posture in the EM complex
 - Met 95% of the 176 major enforceable agreement milestones in FY 2009
 - In FY 2010, there are 137 major enforceable agreement milestones due
 - In FY 2011, EM's goal is 100% compliance
- EM cleanup activities are governed by 37 agreements with federal and state regulators
- Funds the recently negotiated Tri-Party Agreement settlement with Washington state
- Supports the required TRU waste retrievals at Idaho consistent with the terms of the Idaho Settlement Agreement



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	-	-	-
Subtotal, EM	6,468,789	6,000,000	6,292,725	6,470,854	6,543,700
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)	-	-	-	-
Total, EM	5,990,667	6,000,000	5,629,725	6,007,854	6,047,000



Funding by State (FY 2009-2011)

State	FY 2009 Approp.	FY 2009 ARRA	FY 2010 Cong Req.	FY 2010 Approp	FY 2011 Request
Arkansas	1,903	0	0	0	0
California	20,758	62,100	19,010	19,010	15,078
Colorado	9,302	0	6,375	6,375	6,375
Hawaii	1,618	0	0	0	0
Idaho	499,579	468,090	422,578	479,702	422,776
Illinois	19,479	98,500	0	10,000	0
Kentucky	180,788	79,430	154,921	181,419	153,951
Mississippi	3,806	0	0	4,000	0
Montana	1,903	0	0	0	0
Nevada	80,846	44,325	69,931	69,602	69,932
New Mexico	482,749	384,275	436,302	452,535	439,363
New York	94,733	168,005	87,547	89,933	86,361
Ohio	323,786	139,310	402,029	382,136	520,279
Pennsylvania	2,854	0	0	0	0
South Carolina	1,410,708	1,615,700	1,401,659	1,397,082	1,404,326
Tennessee	515,446	755,285	430,596	454,104	466,610
Texas	1,000	0	0	0	0
Utah	45,699	108,350	30,671	39,000	31,000
Washington	2,138,163	1,961,135	2,169,803	2,250,793	2,270,826
Washington, DC	170,669	115,495	198,303	172,163	160,123
Subtotal	6,005,789	6,000,000	5,829,725	6,007,854	6,047,000
PY Offsets	-15,122	0	0	0	0
Total	5,990,667	6,000,000	5,829,725	6,007,854	6,047,000

Notes:

- State Distribution includes funding for Program Direction and Safeguards and Security activities.
- Excludes States with no EM presence, but total reflects all states funding.

