



U.S. DEPARTMENT OF
ENERGY

Office of Environmental Management FY 2010 Budget Request

House Armed Services Committee Staff

**Dr. Inés R. Triay
Cynthia Anderson
Merle Sykes**

June 22, 2009

Summary of Impacts

- Premise that EM cannot spend Recovery Act funding is false
 - EM is on track to execute its spend plan
 - obligate funds by the end of 2009
 - cost funds by the end of 2011
- Recovery Act funding complements the Base Program
 - Varying activities covered by each appropriation
 - High risk activities primarily funded with Base appropriation
 - Soil and groundwater, waste disposition, and decontamination and decommissioning (D&D) primarily funded with Recovery funds
 - Recovery funds enable EM to be in compliance with negotiated agreements and completes legacy cleanup and footprint reduction at sites
- Cuts to request will negatively impact EM's highest risk activities
 - Jeopardize tank waste and special nuclear material treatment and processing activities
 - Unable to meet recently re-negotiated compliance milestones (40+)
 - Loss of jobs (3,000-5,000 or more)
 - Increased life-cycle costs and schedule

Recovery Act Project Criteria

- Maximum return on money invested
- Scope that can most readily be accelerated
 - Soil and groundwater remediation
 - Radioactive solid waste disposition
 - Excess facility D&D
- “Shovel Ready” projects
 - Fully defined cost, scope, and schedule
 - Established regulatory framework
 - Proven technology
 - Proven performance
 - Existing contract vehicles
- Contractual mechanisms in place
 - Ability to deploy resources quickly
- Ability to place “Boots on the Ground”
 - 3,786 jobs preserved or created to date

Recovery Act vs Base Program

Base Program

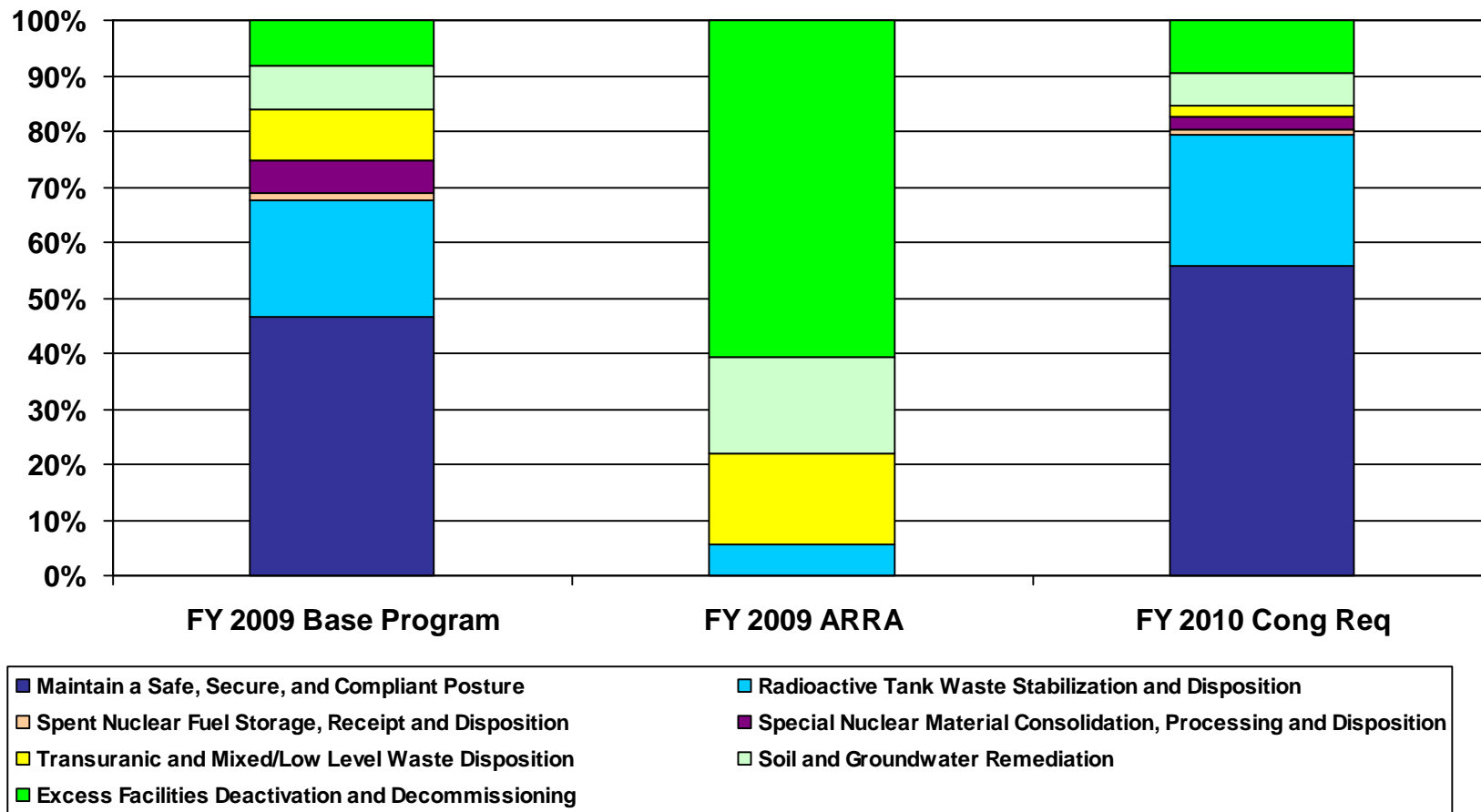
- Tank Waste
 - Maintenance of liquid waste tanks and storage facilities
 - Construction of waste processing facilities
 - Tank closures
- Special Nuclear Material and Spent Fuel
 - Maintenance of storage facilities
 - Stabilization, consolidation, treatment, disposal
- Solid Waste
 - Base operations -- transuranic (TRU) and solid waste disposition
 - Treatment/processing
 - Certification
 - Packaging/transportation
- Soil and Groundwater
 - Groundwater monitoring
 - Installation of groundwater treatment systems
 - Soil remediation
- Facility D&D
 - Facility S&M
 - Deactivation, decontamination, decommissioning, demolition

Recovery Act

- Tank Waste
 - Limited infrastructure upgrades at Hanford
- None included
- Solid Waste
 - TRU and solid waste disposition
 - Treatment/processing
 - Certification
 - Packaging/transportation
- Soil and Groundwater
 - Install groundwater treatment systems
 - Soil remediation
- Facility D&D
 - Deactivation, decontamination, decommissioning, demolition

Recovery Act Work Complements Base Program

Prioritization of EM Work Scope



Highest risks addressed by the “base” program activities are requested in normal appropriations

Recovery Act Objectives

- Create or preserve jobs
 - Between 9,000 and 12,000 jobs
- Achieving footprint reduction through accomplishment of Defense cleanup
 - Complete legacy cleanup and footprint reduction at sites
 - Complete cleanup activities that are traditionally deferred as a result of funding priorities -- soil and groundwater, facility D&D
 - Significant life-cycle cost savings
 - Reutilization of Departmental Assets/Energy Parks
- Enables the program to achieve environmental agreement compliance through FY 2011

Reduction of EM FY 2010 request will undermine the economic stimulus effect and cleanup goals of EM Recovery Act funding

Recovery Act Financial Status

- Recovery Act Defense Environmental Cleanup
 - Total Defense appropriations are \$5.1 billion
 - \$2.5 billion (49%) was obligated within 123 days (since Feb 12 appropriation)
 - \$4.0 billion (78%) projected to be obligated by July 15
 - More than 80% (\$4.2 billion) projected to be obligated by September 30
 - 100% obligation early in FY 2010
- Costs
 - As of June 15 – \$63 million
 - FY 09 projected year end – \$748 million
 - FY 10 projected year end – \$2.9 billion
 - FY 11 projected year end – \$5.1 billion
- Virtually all EM annual funding is obligated in the year of appropriation

- EM routinely costs in excess of 80% of its available funding each year
- In FY 2008, EM costed 96.5%

EM Cost Trends

	FY Approp	FY Total Available to Cost	EOY Cost*	% Costed of Approp	% cost total Avail
FY 2005	7,276,186	9,374,589	7,880,975	108.3%	84.1%
FY 2006	6,589,532	8,554,336	6,900,371	104.7%	80.7%
FY 2007	6,185,533	8,391,665	6,607,971	106.8%	78.7%
FY 2008	5,756,869	6,775,915	6,541,601	113.6%	96.5%
FY 2009	5,991,572	7,947,147	6,403,699	106.9%	80.6%

* FY 2009 EOY Cost based on straightline projection.

- Large percentage of uncosted associated with large construction projects to build tank waste processing facilities
- Lowest appropriation levels result in greatest costing levels

Base Program Impacts - \$468M Reduction

- Worker layoffs
 - Loss of 3,000 to 5,000 jobs across the complex (or up to 10,000 with lengthy CR)
- Highest risk activities of tank waste, special nuclear materials, and spent nuclear will be impacted
 - H-Canyon operations and SNF receipts at Savannah River will be curtailed
 - Jeopardize 2019 start-up of Waste Treatment Plant at Hanford due to infrastructure upgrade delays
 - Cleanup at National Nuclear Security Administration sites significantly reduced
 - ongoing defense operations could be at risk
- Compliance
 - Unable to meet recently re-negotiated compliance milestones (40+) likely resulting in fines
 - Hanford/ORP
 - Idaho
 - Los Alamos
 - Nevada
 - Oak Ridge
 - Savannah River
 - States impatient with declining budgets
 - Regulators are unlikely to come back to the table -- lack of “good faith” from the Department
 - lawsuits could result

BACKUP

EM Program Goals

- Risk Reduction
 - Ensure the safety and health of the public and the workers
 - Protect the environment
- Compliance
 - 37 compliance agreements with state and federal regulatory agencies
- Complete building the capability for dispositioning tank waste, nuclear materials, and spent nuclear fuel
 - Improve construction project performance
- Footprint Reduction
 - Reduce the active area and number of sites
 - Provide maximum return on money invested in EM – reduces overall life-cycle cost of cleanup program
 - Focus on proven successes – solid waste disposal, decontamination and decommissioning (D&D) of contaminated facilities, and soil and groundwater remediation
 - Create thousands of jobs through economic recovery investment
- Reutilization of Assets/Energy Parks
 - Transform EM resources: land, infrastructure, technologies, highly-skilled workforce into Energy Parks

EM Funding Priorities

- Maintain safe, secure, compliant posture across the EM complex
- Radioactive tank waste storage, treatment, and disposal (including technology development and deployment activities in support of high-level waste)
- Spent nuclear fuel storage, receipts and disposition
- Special nuclear material storage, processing, and disposition
- High priority groundwater remediation (selected Hanford, Paducah and Los Alamos plumes)
- Solid waste (transuranic and mixed/low-level waste) treatment, storage, and disposal
- Soil and groundwater remediation
- Nuclear facility D&D
- Non-nuclear facility D&D

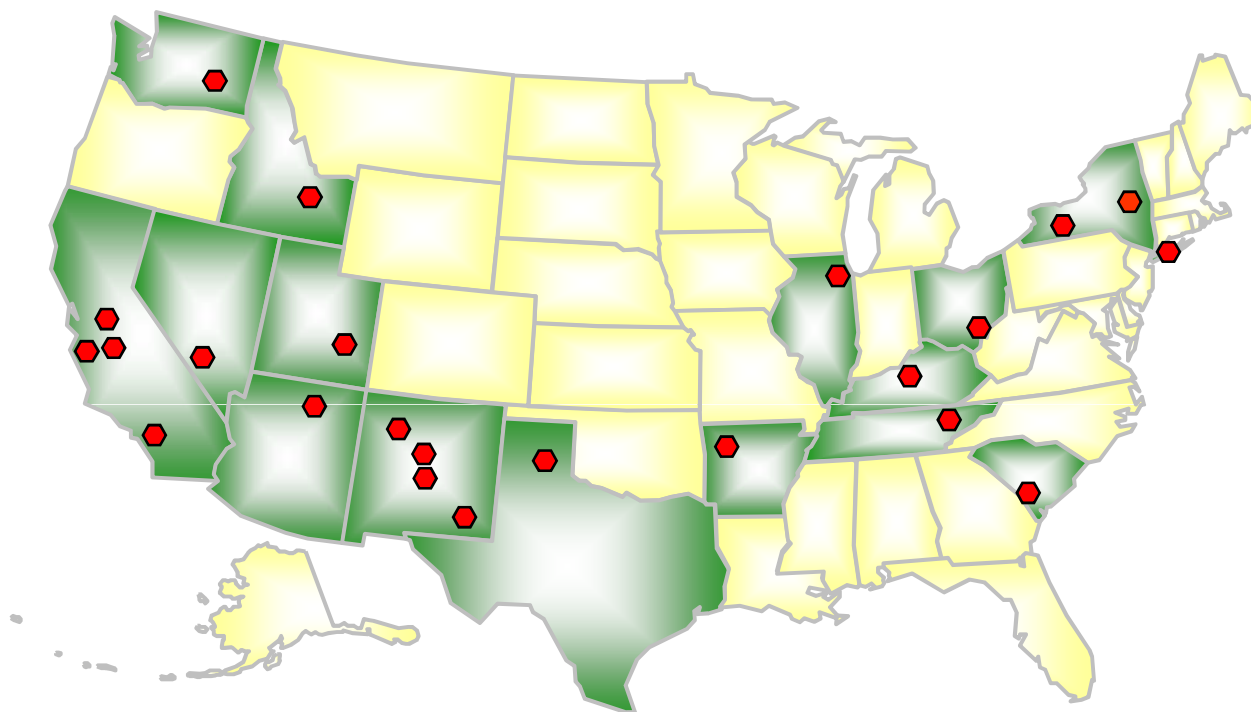
Recovery Act Financial Status

Planned Obligations and Costs (In Whole Dollars)

	Spend Plan	CY Allocation	CY Obligation	CY Cost	Projected EOY Obligations*		Projected EOY Costs			
					FY 2009	FY 2010	FY 2009	FY 2010	FY 2011	
Defense Environmental Cleanup - Recovery Act										
River Protection	326,035,000	326,035,000	42,600,000	2,641,924	260,828,000	65,207,000	45,000,000	121,000,000	160,035,000	
Hanford	1,634,500,000	1,634,500,000	1,268,998,921	13,636,570	1,307,600,000	326,900,000	168,000,000	689,000,000	777,500,000	
Idaho	467,875,000	467,875,000	374,000,000	10,496,660	374,300,000	93,575,000	81,800,000	215,800,000	170,275,000	
Oak Ridge	558,110,000	558,110,000	302,392,956	522,182	446,488,000	111,622,000	83,470,000	281,610,000	193,030,000	
Savannah River	1,615,400,000	1,615,400,000	387,600,000	33,827,249	1,292,320,000	323,080,000	291,000,000	592,000,000	732,400,000	
SPRU	31,775,000	31,775,000	12,000,000	0	25,420,000	6,355,000	1,000,000	18,900,000	11,875,000	
LANL	197,000,000	197,000,000	0	0	157,600,000	39,400,000	28,270,000	83,790,000	84,940,000	
Miamisburg	19,700,000	19,700,000	0	0	15,760,000	3,940,000	1,400,000	16,800,000	1,500,000	
Nevada	44,325,000	44,325,000	5,000,000	0	35,460,000	8,865,000	8,806,000	13,655,000	21,864,000	
Carlsbad	172,375,000	172,375,000	130,683,700	1,881,046	137,900,000	34,475,000	37,501,000	76,752,000	58,122,000	
Program Direction	25,635,000	10,170,000	1,230,959	2,577	25,635,000	0	2,000,000	0	7,905,000	
OMB Q4 Holdback	34,270,000				34,270,000	0				
Total Defense Environmental Cleanup - Recovery Act	5,127,000,000	5,077,265,000	2,524,506,536	63,008,208	4,113,581,000	1,013,419,000	748,247,000	2,109,307,000	2,219,446,000	
Non-Defense Environmental Cleanup - Recovery Act										
Brookhaven	42,355,000	42,355,000	34,000,000	1,494,686	33,884,000	8,471,000	14,417,000	16,836,000	11,102,000	
ETEC	54,175,000	38,300,000	38,300,000	0	43,340,000	10,835,000	931,000	8,083,000	45,161,000	
LANL	14,775,000	14,775,000	0	0	11,820,000	2,955,000	2,820,000	5,640,000	6,315,000	
Moab	108,350,000	108,350,000	82,000,000	0	86,680,000	21,670,000	25,240,000	41,120,000	41,990,000	
West Valley	73,875,000	73,875,000	56,000,000	0	59,100,000	14,775,000	11,600,000	32,700,000	29,575,000	
Oak Ridge	78,800,000	78,800,000	3,613,897	92,697	63,040,000	15,760,000	6,360,000	47,800,000	24,640,000	
Argonne	98,500,000	35,000,000	35,000,000	0	78,800,000	19,700,000	11,413,000	32,700,000	54,387,000	
SLAC	7,925,000	7,925,000	7,925,000	0	6,340,000	1,585,000	1,624,000	4,689,000	1,612,000	
Program Direciton	2,415,000	1,200,000	53,479	14,371	2,415,000	0	1,260,000	1,680,000	1,305,000	
OMB Q4 Holdback	1,830,000				1,830,000	0				
Total Non-Def Environmental Cleanup - Recovery Act	483,000,000	400,580,000	256,892,376	1,601,754	387,249,000	95,751,000	75,665,000	191,248,000	216,087,000	
D&D Activities - Recovery Act										
Oak Ridge	118,200,000	118,200,000	90,285,000	166,136	94,560,000	23,640,000	7,300,000	53,900,000	57,000,000	
Paducah	78,800,000	20,000,000	2,500,000	86,274	63,040,000	15,760,000	7,120,000	37,620,000	34,060,000	
Portsmouth	118,200,000	20,000,000	4,600,000	0	94,560,000	23,640,000	16,600,000	79,100,000	22,500,000	
Uranium Thorium Reimbursements	68,950,000	68,950,000	14,181,497	14,181,497	68,950,000	0	22,900,000	18,200,000	27,850,000	
Program Direciton	1,950,000				1,950,000	0	1,710,000	2,280,000	1,860,000	
OMB Q4 Holdback	3,900,000				3,900,000	0				
Total D&D Activities - Recovery Act	390,000,000	227,150,000	111,566,497	14,433,907	326,960,000	63,040,000	55,630,000	191,100,000	143,270,000	
EM Sum:	6,000,000,000	5,704,995,000	2,892,965,409	79,043,869	4,827,790,000	1,172,210,000	879,542,000	2,491,655,000	2,578,803,000	

* Projected obligations assume the 20% holdback is released to field in early FY2010. The performance at some sites may accelerate this schedule.

EM Cleanup Complex



Cleanup activities at 23 sites in 15 states

EM Cleanup Scope



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	Immobilization for disposal at a geologic repository and disposition through MOX (non-EM facility).
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 at commercial facilities or government 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	Cleanup to regulatory standards for other uses.
Geographic Sites	Multiple Sites	