



U.S. DEPARTMENT OF
ENERGY

OFFICE OF
**ENVIRONMENTAL
MANAGEMENT**

EM Program Update and FY15 Budget Overview

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for Environmental Management
April 23, 2014

EM Cleanup Program: Remediates the Environmental Legacy of the U.S. Nuclear Weapons Complex

EM is an **operational federal program**, performing a wide variety of tasks to clean up the environmental legacy of the U.S. nuclear weapons complex:

PACKAGE



EXCAVATE



**BUILD &
TREAT**



DEMOLISH



TRANSPORT

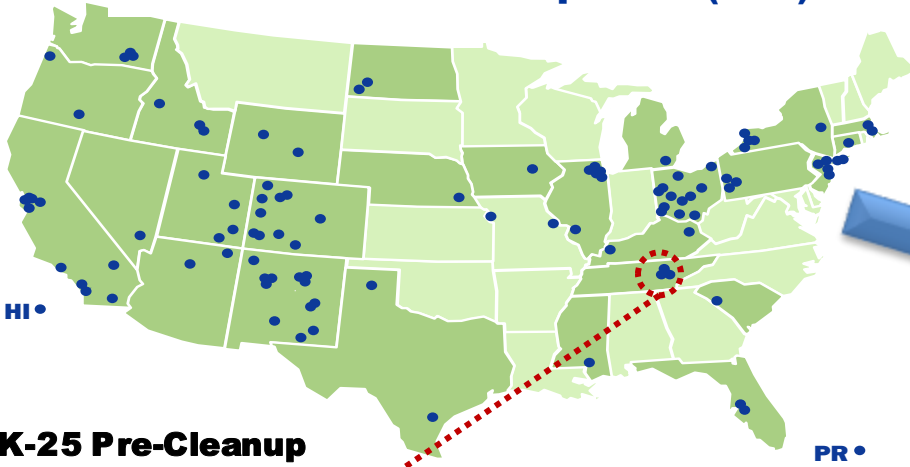


SAFEGUARD

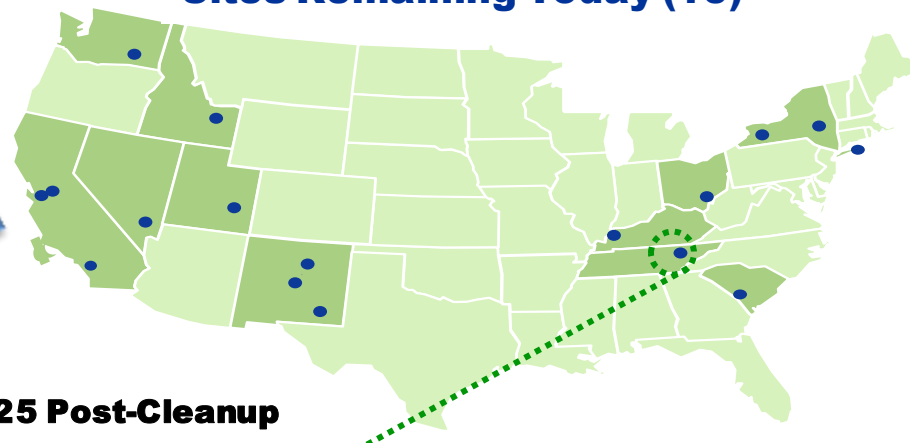


EM Has Made Significant Progress Cleaning Up the Environmental Legacy of the Cold War

AK • **EM Historical Cleanup Sites (107)**



Sites Remaining Today (16)



K-25 Pre-Cleanup



K-25 Post-Cleanup



Where Did \$144B Go?

EM funds from 1989-2013

Tank Waste
\$35B / 24%



Waste Management
\$24B / 17%



Soil & Groundwater
\$19B / 13%



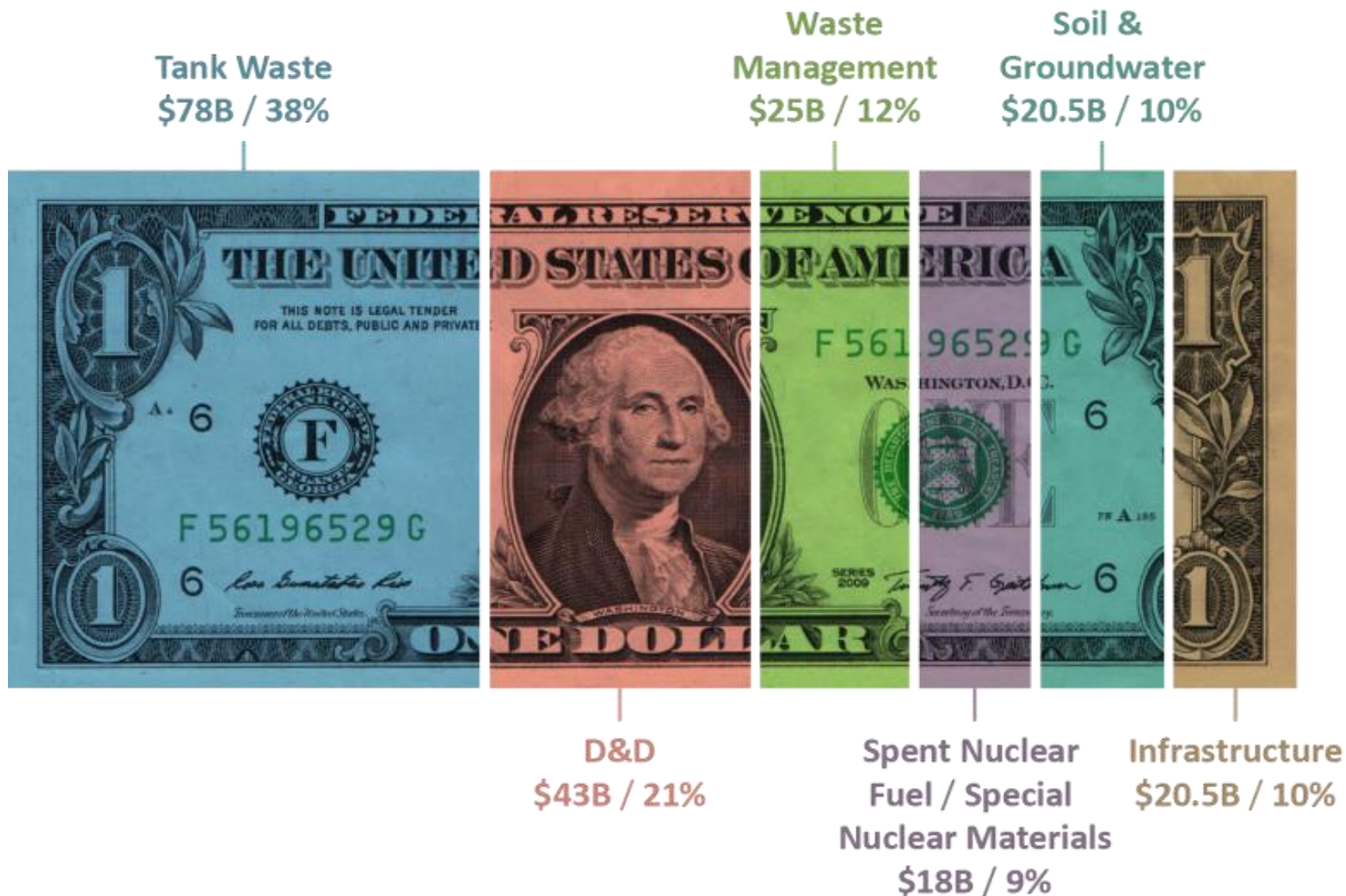
D&D
\$24B / 17%

Spent Nuclear Fuel /
Special Nuclear Materials
\$20B / 14%

Infrastructure
\$22B / 15%


What's Left to Do?

EM Planning Estimates 2013 – 2060 = \$205 B



Firefox | EM History Timeline | projectenhancement.com/Timeline/default.html

Filter Options by Site and Cleanup Mission Area



U.S. DEPARTMENT OF
ENERGY

OFFICE OF
ENVIRONMENTAL
MANAGEMENT

DISCOVERING OUR HISTORY
BUILDING OUR LEGACY


December 1940

The Office of Environmental Management (EM) Timeline

Use the Filter Options drop-down menu at the top of the screen to sort and display information by Site and by Cleanup Mission Area – then press the Update Timeline button to display results. For Cleanup Mission Area definitions, use the link on the Filter drop-down menu.

JUNE 1940
The Office of Environmental Management (EM) Timeline

JUNE 1941
Overview of the History of the Department of Energy (DOE) and the Office of Environmental Management (EM)



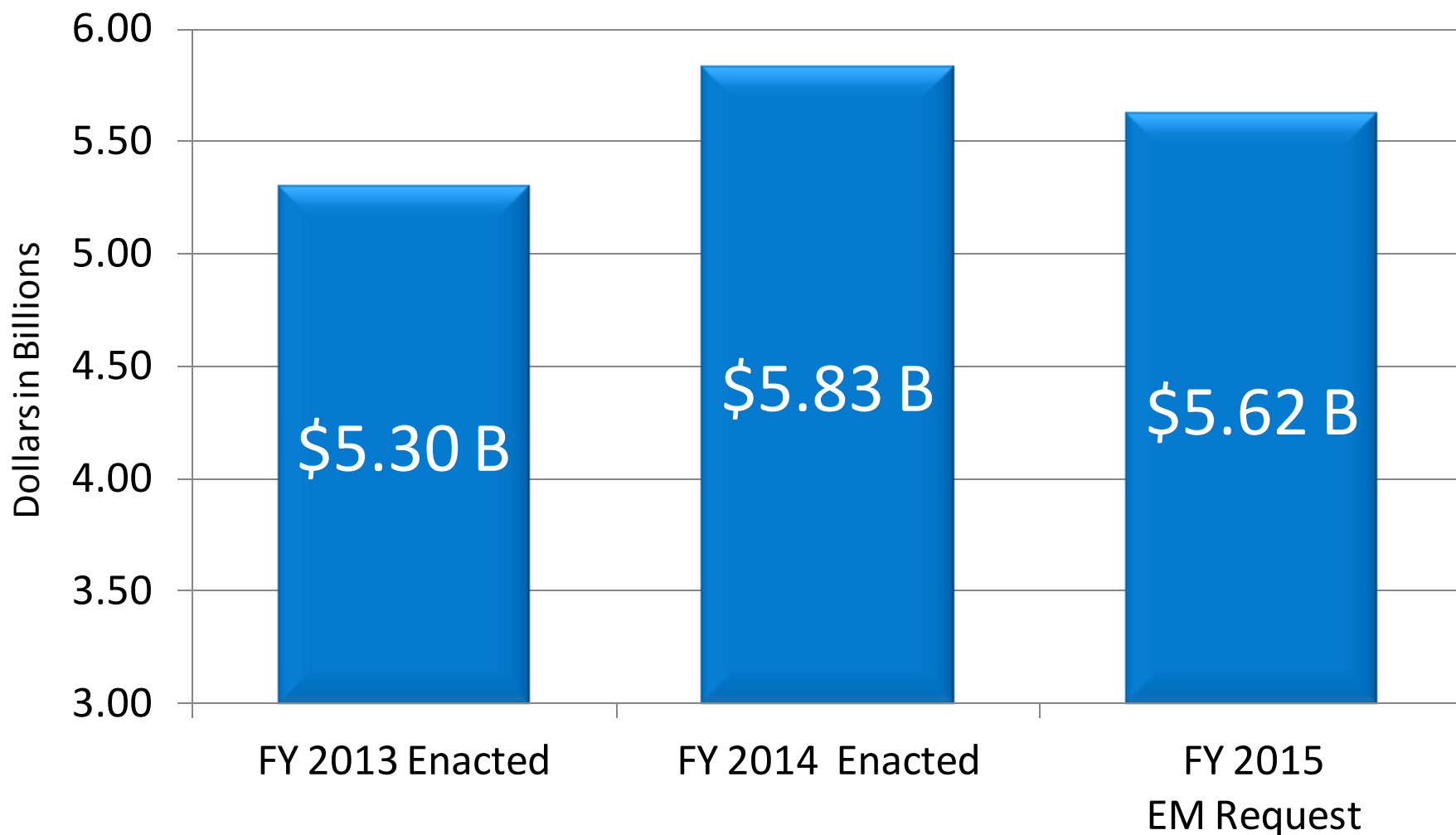
Timeline events:

- 1939: The Office of Environmental Management (EM)
- 1940: Overview of the History of the Department of Energy (DOE) and the Office of Environmental Management (EM)
- 1941: The Office of Environmental Management (EM)
- 1942: Oak Ridge Acquired by Army Corps of Engineers for
- 1942: Hanford Site Established as Second Manhattan
- 1942: Production Sites Established for the Manhattan Project
- 1943: Los Alamos National Lab (LANL) Established During
- 1943: Hanford's Plutonium Production Began During World War II
- 1944: The Oak Graphite Began C
- 1944: The Steps of Weapons Production

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FY 2015 Budget Request

Total EM Funding: FY 2013 – FY 2015



EM FY 2015 Budget Request

Funding by EM Mission Area

Radioactive Tank Waste

\$ 2,042M / 36%

Special Nuclear Materials and Used Nuclear Fuel**

\$ 971M / 17%

Soil and Groundwater

\$ 466M / 8%

EM's FY 2015 Budget Request - \$5.622 Billion Total

Facility D&D

\$ 992M / 18%

Transuranic & Solid Waste

\$ 758M / 13%

Site Services*

\$ 392M / 7%

*Includes Program Direction, Program Support, Technology Development & Deployment, Post Closure Administration and Community and Regulatory Support

**Includes Safeguards and Security

EM FY 2015 Budget Request

Funding by Appropriation

(dollars in millions)

Appropriation	FY 2013 *Current (\$M)	FY 2014 Enacted (\$M)	FY 2015 Request (\$M)
Defense Environmental Cleanup	4,646	5,000	5,328
Non-Defense Environmental Cleanup	223	234	226
Uranium Enrichment Decontamination and Decommissioning Fund	448	599	531
Subtotal, Environmental Management	5,318	5,833	6,085
D&D Fund Offset	0	0	-463
Use of Prior Year Funds (Defense & Non-Defense Environmental Cleanup)	-19	-2	0
Total, Environmental Management	5,299	5,830	5,622

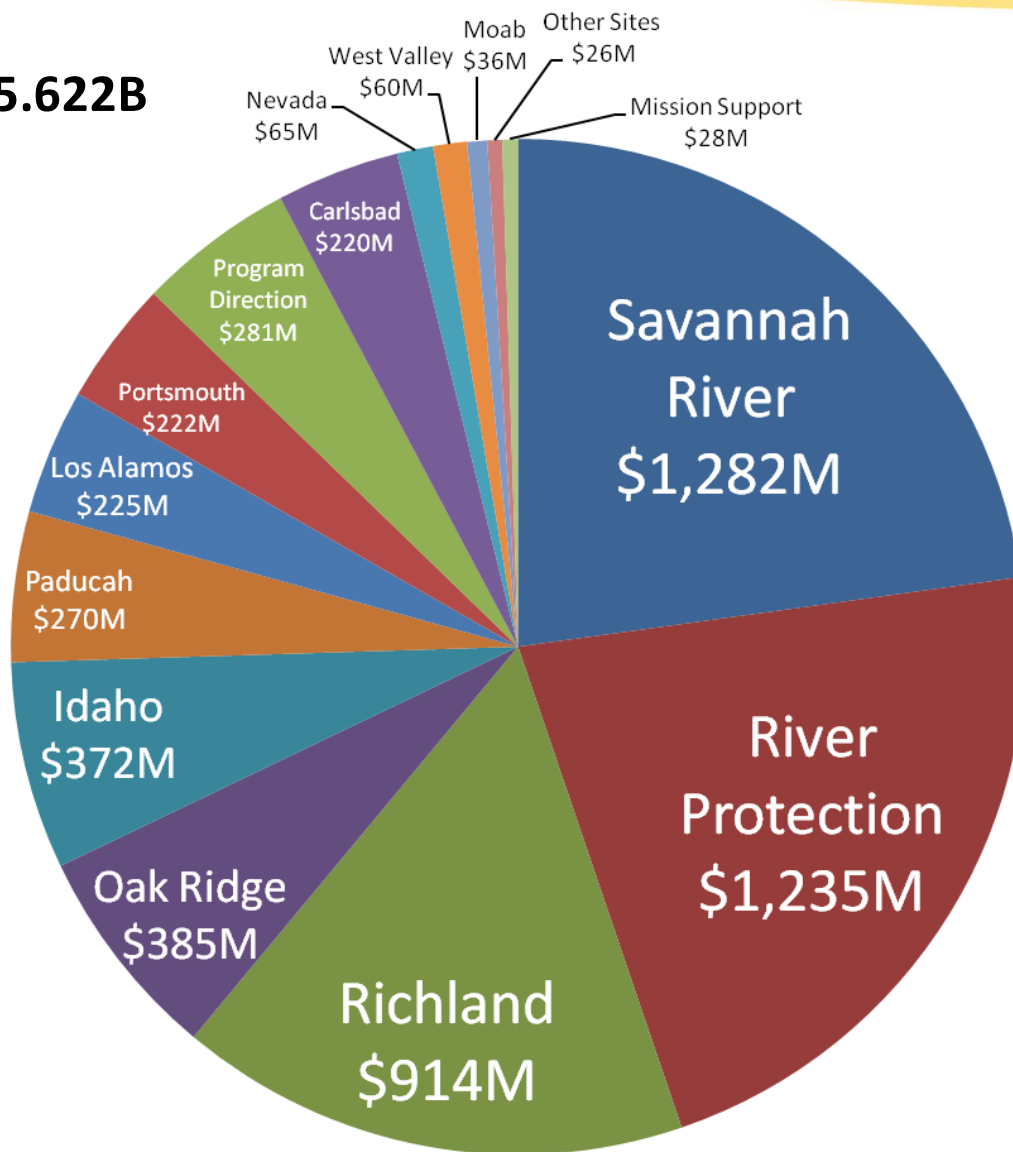
Cleanup: 4,865
D&D Fund Deposit: 463
Total: 5,328

*FY 2013 reflects across-the-board rescission, sequestration and EM reprogramming actions executed throughout the year.

EM FY 2015 Budget Request

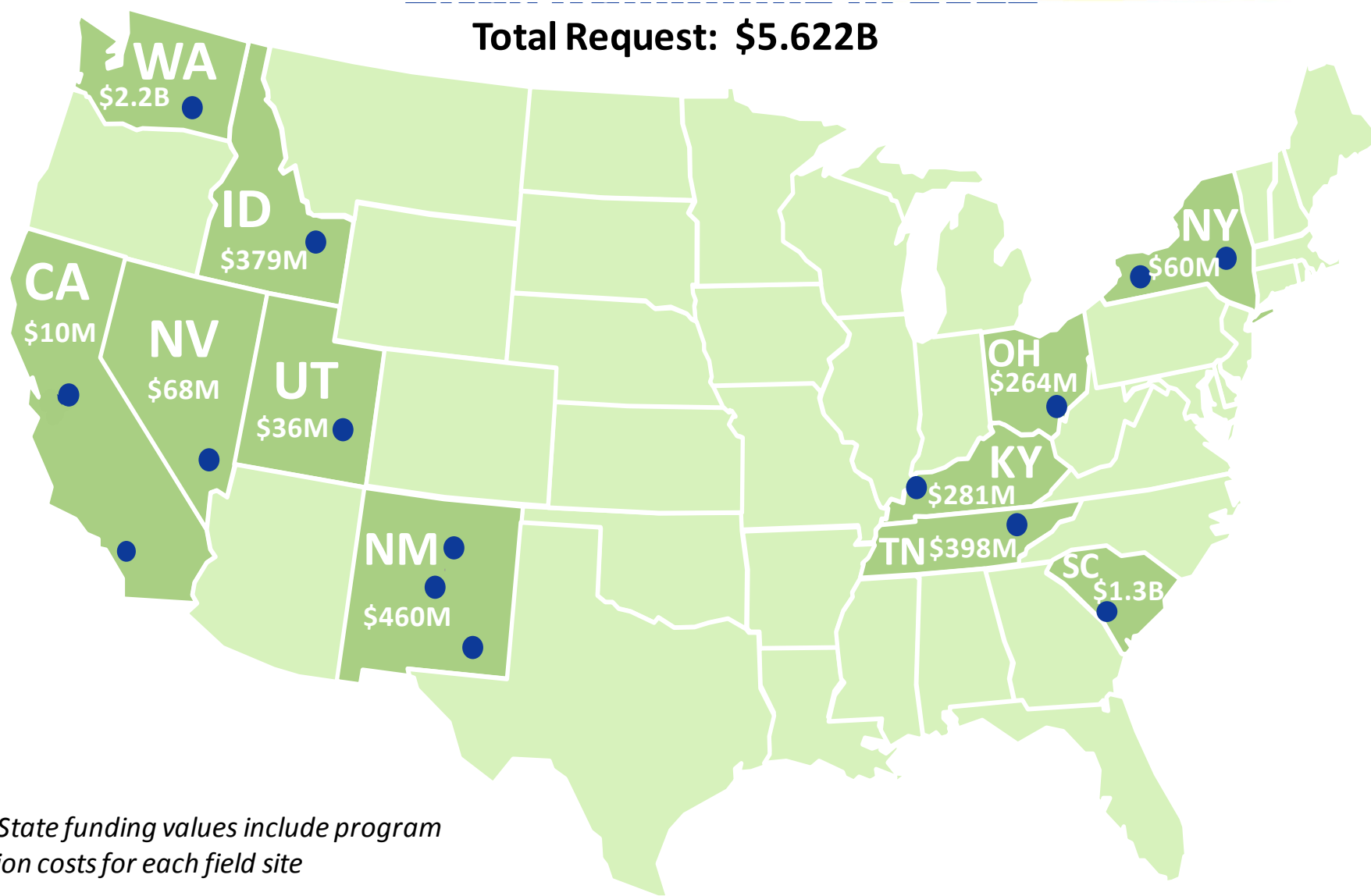
Funding by Field Site

Total Request: \$5.622B



EM FY 2015 Budget Request

Funding by State



Radioactive Liquid Waste Treatment: Making Progress in 2015

Key Activities and Accomplishments in FY 2015 (Total Funding: \$2 Billion)

Cleanup Progress



Integrated Waste Treatment Unit (ID)

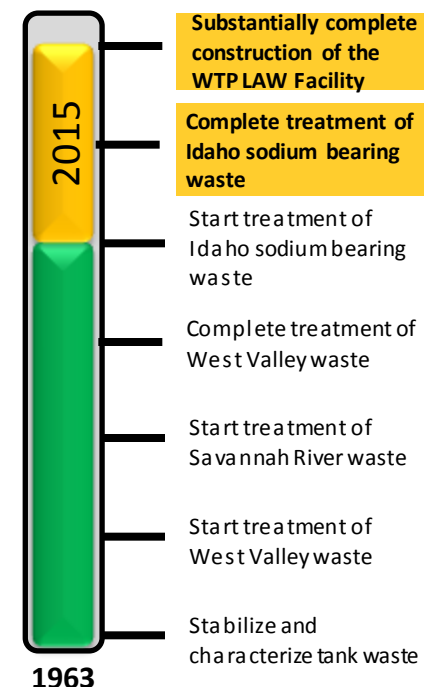


Defense Waste Processing Facility (SC)



Waste Treatment and Immob. Plant (WA)

- Complete retrieval and treatment of sodium bearing waste from all 4 remaining tanks at Idaho.
- Package 120 - 130 canisters of high level waste at Savannah River, achieving over 50% overall completion of the site's high level waste mission.
- Consistent with the Department's revised option for the Waste Treatment and Immobilization Plant (WTP), which is designed to move the WTP toward immobilization of waste as soon as practicable while resolution of technical issues continues, the FY 2015 budget includes support for analysis and preliminary design of a Low Activity Waste (LAW) Pretreatment System.



Cleanout and Demolition of Contaminated Facilities: Finishing Up and Moving Out in 2015

Key Activities and Accomplishments in FY 2015 (Total Funding: \$992 Million)

Cleanup Progress

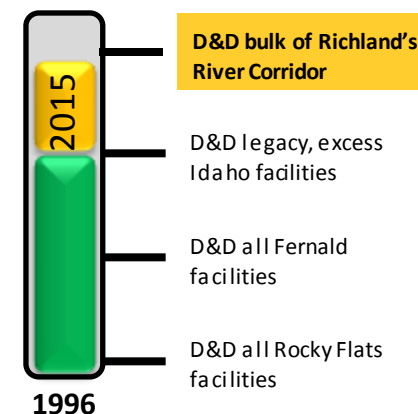


• Finish up major facility cleanout and demolition projects:

- Complete bulk of cleanup of Richland's River Corridor, which contained over 500 facilities. The 324 Facility will be the primary River Corridor facility remaining to be completed after 2015.
- Proceed with cleanout and demolition of the last two major facilities in Oak Ridge's East Tennessee Technology Park (K-27 and K-31). The area previously contained nearly 600 facilities.
- Complete demolition of the C-410 Complex at Paducah, which contained 15 facilities

• Prepare to move out on a new round of facility cleanout and demolition:

- Complete transition of the massive Paducah Gaseous Diffusion Plant to DOE and initiate critical facility cleanout actions.
- Complete equipment removal from one of the three main facilities of the Portsmouth Gaseous Diffusion Plant, which was transferred to DOE in 2011.



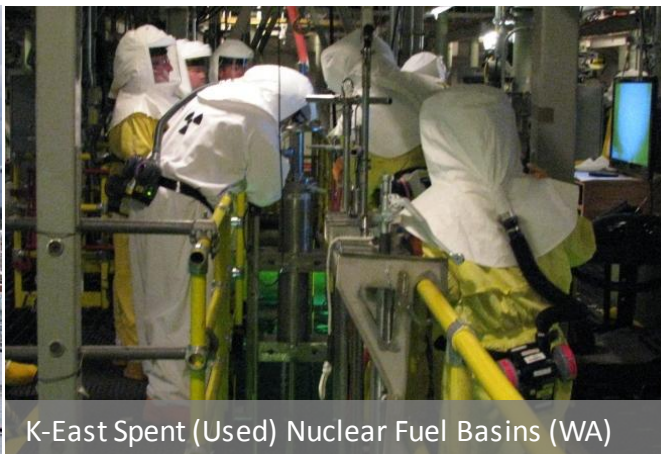
Nuclear Materials and Fuel: Moving From Interim Safe Storage to Final Disposition in 2015

Key Activities and Accomplishments in FY 2015 (Total Funding: \$971 Million)

Cleanup Progress

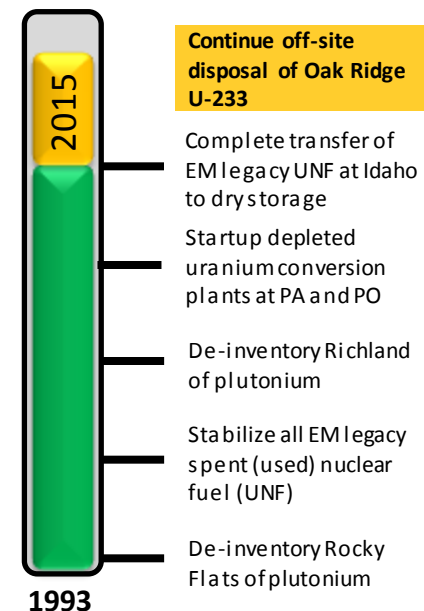


H Canyon Facility (SC)



K-East Spent (Used) Nuclear Fuel Basins (WA)

- At the Savannah River Site, plutonium disposition via preparation for conversion to oxide to provide feed for NNSA's surplus plutonium disposition program.
- Also at the Savannah River Site, continue campaign to process certain used nuclear fuel from the High Flux Isotope and Material Test Reactors.
- Continue disposition of uranium-233 currently stored at Oak Ridge.
- At Richland, continue work required to retrieve and package spent (used) nuclear fuel sludge from the K-West Basin.
- At Paducah and Portsmouth, convert and package over 30,000 tons of depleted uranium for final disposition, reaching over 10% overall completion of the mission.



Transuranic (TRU) Waste: Approaching Completion of Multiple Sites in 2015

Key Activities and Accomplishments in FY 2015 (Total Funding: \$758 Million)

Cleanup Progress



Salt Haul Truck Fire (NM)

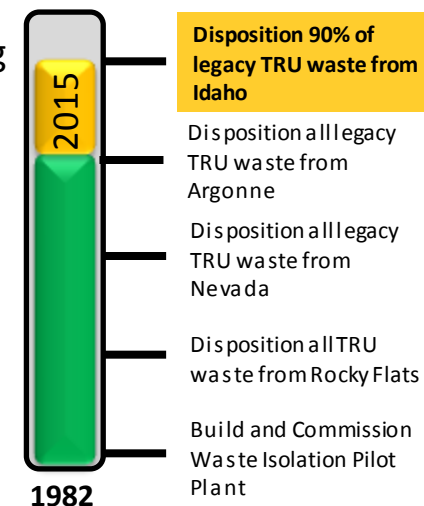


Waste Retrieval (ID)



Waste Shipment (WCS)

- Neither incident has led to a risk to public or workers at the site based on our current understanding. DOE is addressing management issues. DOE is still committed to meeting its obligations.
- Despite interruption in normal WIPP operations, transuranic characterization, processing and packaging progress continues.
- Idaho's Advanced Mixed Waste Treatment Plant will continue to process transuranic waste through the plant.
- The Department continues to evaluate potential alternatives for the disposition and storage of transuranic waste located at generator sites.



Soil and Groundwater Remediation: Using New and Existing Systems to Address Risk in 2015

Key Activities and Accomplishments in FY 2015 (Total Funding: \$466 Million)

Cleanup Progress

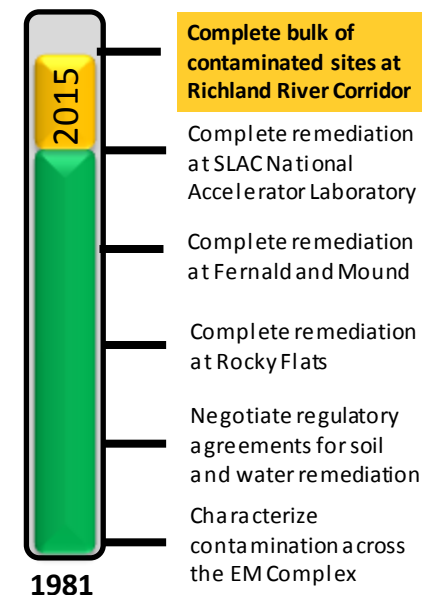


Installation of Treatment System (KY)

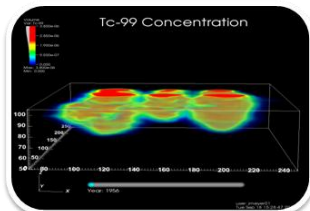


200 West Pump and Treat Facility (WA)

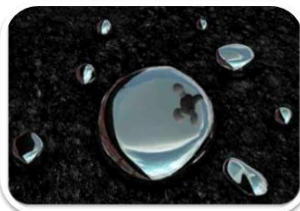
- Complete remediation of the bulk of the roughly 1,200 contaminated release sites in Richland's River Corridor. After 2015, 618-10 and 618-11 Burial Grounds and the waste site beneath 324 Building will be the only major remaining release sites.
- Operate groundwater remediation systems at multiple sites, including 39 systems at the Savannah River Site alone.
- At Oak Ridge, complete preliminary design of a new facility to treat mercury contamination in surface water.
- At Los Alamos, conduct design on a proposed new facility to treat chromium contamination in groundwater.
- At the Nevada National Security Site, complete closure activities for over 20 contaminated soil sites.



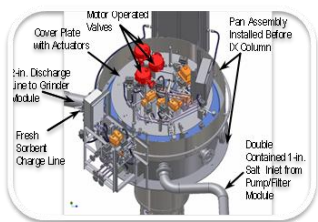
Perform technology development and deployment to resolve critical gaps in EM's capabilities (\$13 million)



Groundwater modeling



Mercury remediation



Separations technologies



Maximizing waste loading in glass

Support a federal workforce of 1,500 FTEs to oversee the cleanup effort (\$281 million)



Provide other services, including strategic bulk purchasing of commodities, proactive safety analysis and support for Minority-Serving Institutions.

Charge to the EM SSAB Chairs and their boards:

- Budget Priorities
- Identifying Community Expectations with Reduced Funding
- Broadening Community Participation in EM SSAB Membership, Meetings

