

# Environmental Management Advisory Board Public Meeting

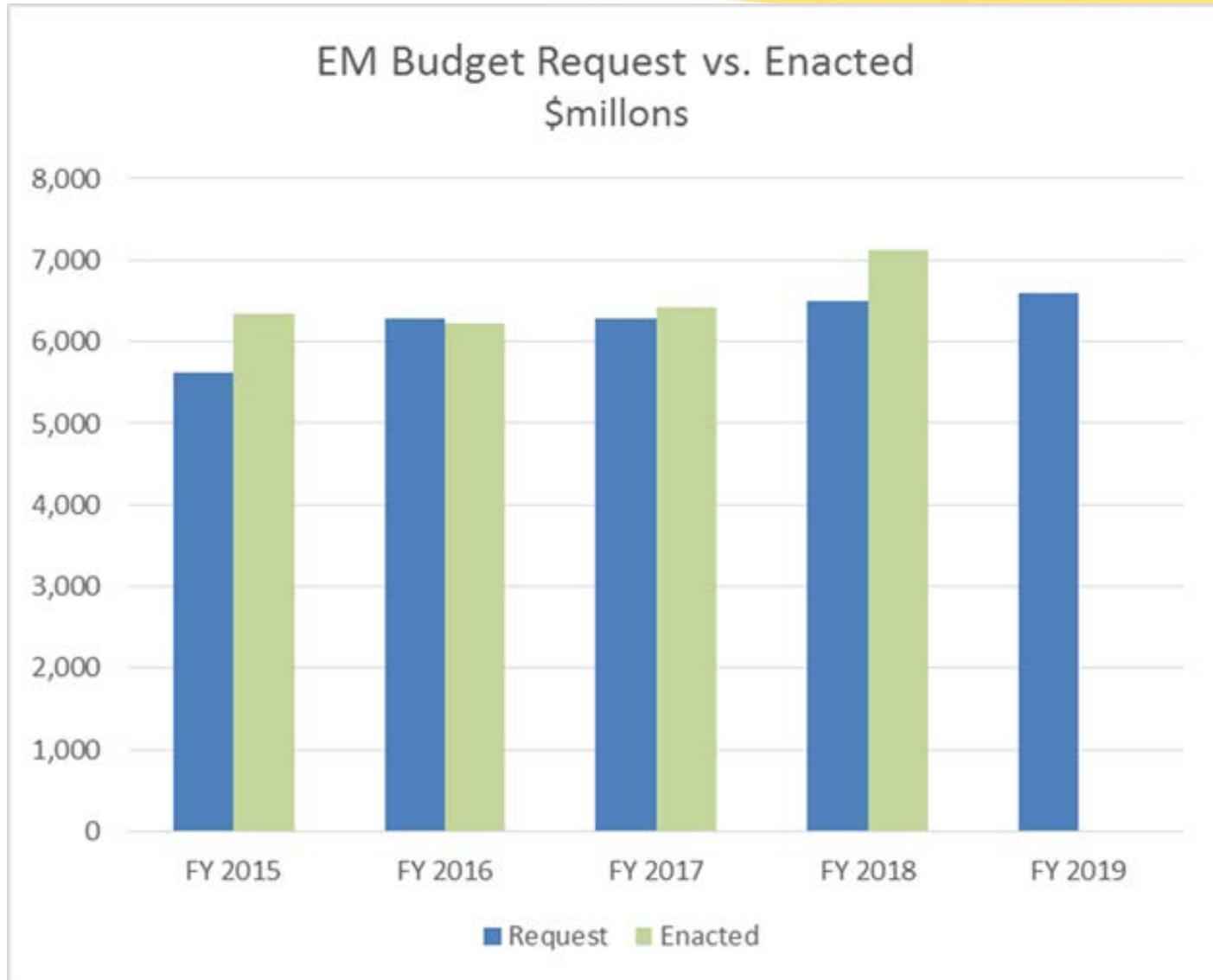
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Acting Associate Principal Deputy Assistant Secretary  
for Corporate Services

**May 16, 2018**

- **FY 2018 Budget Omnibus**
- **FY 2019 Budget Request Status**
- **Environmental Liability**
- **Budget and Planning Integration**





# FY17-19 Budget Requests

Site	FY 2017 Enacted	FY 2018 Request	FY 2018 HEWD	FY 2018 SEWD	FY 2018 Enacted	FY 2019 Cong Req.
Brookhaven	0	2	1	2	2	2
Carlsbad	325	323	323	307	383	403
ETEC	10	9	8	9	9	8
Idaho	390	359	394	359	446	359
Los Alamos	194	192	194	218	220	192
Lawrence Livermore	1	1	31	1	101	2
Lawrence Berkeley	9	0	0	21	41	0
Moab	38	35	34	38	38	35
Nevada	62	60	60	60	60	60
Oak Ridge	498	390	461	515	640	409
Richland	916	800	840	910	947	747
River Protection	1,500	1,504	1,518	1,590	1,560	1,439
Paducah	272	270	270	273	273	270
Portsmouth	382	418	418	418	448	415
Savannah River	1,369	1,448	1,398	1,426	1,471	1,656
SPRU	4	2	2	2	5	15
Sandia	4	3	3	3	3	3
West Valley	70	64	68	78	78	64
Defense Closure Site Activities	9	5	5	5	5	5
Non-Defense Closure Site Activities	6	0	0	0	10	0
Program Direction	290	300	300	290	300	300
Mission Support Activities	15	43	15	15	15	13
Technology Development	25	25	20	25	35	25
Excess Facilities	0	225	0	55	0	150
Uranium Thorium Reimbursements	30	30	33	14	36	30
Total, EM	6,420	6,508	6,395	6,634	7,126	6,601

- President's FY 2019 Budget was released on February 12, 2018  
*Detailed justification's released on March 20, 2018*
- EM has briefed HEWD and SEWD on FY 2019 budget request
- EM is currently addressing follow-on questions as needed
- Anticipate initial Congressional Marks will be received in May/June timeframe  
*Will continue to work with Congressional staffers to address any additional needs as the process moves forward. Impacts briefings on Marks in late summer/early fall*
- Anticipate FY 2019 will operate a portion of the year under a continuing resolution (CR)  
*Planning for a minimum of 3 month CR*

**Environmental Management's Fiscal Year 2019 Budget Request is a record high for a second straight year and demonstrates the Administration's strong and continued support for cleanup.**

**The request allows EM to continue making progress on those capabilities necessary to tackle longer-term risks that are significant contributors to lifecycle costs:**

- Ramps up efforts to address radioactive tank waste at Savannah River---the site's largest environmental challenge
- Supports ventilation system completion and critical infrastructure at WIPP to enable increased waste shipments and emplacement.
- Continues progress at Hanford's Waste Treatment Plant to support initiating waste treatment by December 2023, per the Consent Decree.
- Supports shifting to construction for the planned Mercury Treatment Facility and continued progress on the capability to address the remaining U-233 stockpile at Oak Ridge.



Tank 20 at the Savannah River Site



Waste Emplacement at the Waste Isolation Pilot Plant

# EM has Six Primary Mission Areas

**Special Nuclear Materials & Spent Nuclear Fuel**  
\$ 532M / 8%

**TRU & Solid Waste**  
\$ 916M / 14%

**Soil & Groundwater**  
\$ 451M / 7%



**EM's FY 2019 Congressional Budget Request - \$6.601 Billion Total**

**Radioactive Tank Waste**  
\$ 2,525M / 38%

**Facility D&D**  
\$ 1,157M / 18%

**Site Services**  
\$ 1,020M / 15%

EM Sites	Special Nuclear Materials & Spent Nuclear Fuel	TRU & Solid Waste	Soil & Groundwater	Radioactive Tank Waste	Facility D&D	Site Services	FY 19 (\$M)
Savannah River	✓	✓	✓	✓	✓	✓	1,656
River Protection		✓					1,439
Richland	✓	✓	✓	✓	✓	✓	747
Idaho	✓	✓	✓	✓		✓	359
Oak Ridge	✓	✓			✓	✓	409
Portsmouth	✓				✓	✓	415
Paducah	✓				✓	✓	270
Carlsbad		✓				✓	403
Los Alamos		✓				✓	192
West Valley		✓			✓	✓	64
All Others		✓			✓	✓	647

EM will continue progress of work proposed in the FY 2018 Congressional budget with work on facilities at the Y-12 National Security Complex, and at Lawrence Livermore National Laboratory. (\$150M)

Y-12



Y-12 National Security Complex – Biology Complex Building

Lawrence Livermore National Laboratory (LLNL)



LLNL– Livermore Pool Type Reactor Building 280



## South Carolina (\$1,656M)

### Savannah River Site

- Supports Salt Waste Processing Facility start-up
- Operate Defense Waste Processing Facility producing 135 -175 canisters.
- Continue construction of Saltstone Disposal Units 7, 8, and 9
- Complete D Area Ash Project including closure of the 488-1D Ash Basin and the Coal Pile Runoff Basin.
- Supports foreign and domestic fuel receipts in L Area.
- Supports disposition of spent (used) nuclear fuel in H-Canyon

#### Recent Accomplishments

- Completed construction of Saltstone Disposal Unit (SDU) 6 (FY 2017).
- Completed significant tie-in work to connect the Salt Waste Processing Facility to the liquid waste facilities (FY 2017).
- Removed failed Melter 2 in the Defense Waste Processing Facility and installed Melter 3 (FY 2017/FY 2018).
- Produce 40 Canisters of highly radioactive waste at the Defense Waste Processing Facility (DWPF) and Treat and disposition 700,000 gallons of tank waste salts (FY 2018).



Defense Waste Processing Facility



Salt Waste Processing Facility



## Washington (\$2,186)

### Richland (\$747M)

- Continues Cesium Strontium Capsule activities to move capsules from wet to dry storage
- Continues waste site remediation and groundwater treatment
- Continue focus on canyon and waste site risk mitigation

#### Recent Accomplishments

- Treated 2.2 billion gallons of contaminated groundwater and completed T Plant modification for receipt of K Basin sludge (FY 2017)

### Office of River Protection (\$1,439M)

- Continues construction, startup and commissioning activities at the Waste Treatment Plant supporting direct feed of low-activity waste for immobilization by December 2023.
- Continues design activities for the Low Activity Waste Pre-treatment System.
- Pursue a complementary pretreatment capability using tank-side cesium removal equipment to provide initial feed by December 2023, per the Consent Decree.
- Continues tank vapors work and supports Single Shell Tank retrievals

#### Recent Accomplishments

- Completed testing for WTP switchgear building (FY 2017).
- Completed the retrieval and transfer of high-level radioactive waste from tank AY-102 (FY 2017).



Waste Encapsulation and Storage Facility



Waste Treatment and Immobilization Plant



## Idaho (\$359M)

### Idaho

- Continues commissioning and the startup of Integrated Waste Treatment Unit Project
- Repackaging and characterizing contact-handled TRU waste
- Continues buried waste retrieval activities completing exhumation of the ninth and final retrieval area
- Experimental Breeder Reactor-II and Advanced Test Reactor spent (used) nuclear fuel will be transferred from wet to dry storage.

#### Recent Accomplishments

- Completed retrieval of about 65,000 cubic meters of transuranic waste at the Idaho Site's Advanced Mixed Waste Treatment Project (FY 2017).
- Moved 20 percent of Advanced Test Reactor spent fuel of the Idaho Nuclear Technology and Engineering Center (INTEC) wet storage basin to dry storage (FY 2017).



Integrated Waste Treatment Unit



Accelerated Retrieval Project Enclosure 9

## Tennessee (\$409M)

### Oak Ridge

- Continues capital asset project with modifications to the Building 2026 to support processing of U-233 materials
- Completes design and begins site preparation of the Outfall 200 Mercury Treatment Facility
- Continues demolition of remaining facilities at East Tennessee Technology Park
- Continue slab and soil remediation at East Tennessee Technology Park
- Initiates design for a new On-Site Waste Disposal Facility
- Continues mercury-related technology development

#### Recent Accomplishments

- Completed demolition of the K-732 Switchyard, K-832, K-832-H, and K-1203 at ETPP (FY 2017).
- Receive Critical Decision 2/3 Approval for the Building 2026 Uranium-233 Processing Preparation Project (FY 2018).
- Completed 13 contact-handled Transuranic waste shipments to the Waste Isolation Pilot Plant in FY 2017.



Demolition of East Tennessee Technology Park facilities



Outfall 200 Mercury Treatment Facility Rendering



## Ohio (\$415M)

### Portsmouth

- Continues operations of the Depleted Uranium Hexafluoride (DUF6) conversion facility
- Continues to clean out and prepare Gaseous Diffusion Plant (GDP) buildings for demolition: Deactivation focused on the second and third process buildings and achieving deactivation requirements for three additional units
- Supports continued construction of On-Site Waste Disposal Facility (OSWDF)

#### Recent Accomplishments

- Resumed DUF6 Operations after 3-year shutdown of operations (FY 2018).
- Completed construction of the On-Site Waste Disposal Facility Sediment Pond 3 (FY 2018).



X-333 Process Building at Portsmouth



## Kentucky (\$270M)

### Paducah

- Continues operations of the Depleted Uranium Hexafluoride (DUF6) conversion facility
- Continues building stabilization activities at the C-400 Complex

#### Recent Accomplishments

- Reached final regulatory agreement to accelerate the investigation and cleanup of the C-400 Complex (FY 2017).
- Complete Limited Area footprint reduction for the administrative facilities (C-100, C-101, C-102, and C-304) (FY 2018).



C-400 Complex at Paducah



## New Mexico (\$598M)

### Carlsbad (\$403M)

- Continues waste emplacement and increases transuranic waste shipments to 10 per week
- Continues work on the new ventilation system and addresses needs for major repair or replacement of critical infrastructure

#### Recent Accomplishments

- Resumed waste emplacement and mining activities at the Waste Isolation Pilot Plant (FY 2017).
- Achieve Critical Decision-2/3 to commence construction on the Safety Significant Confinement Ventilation System (15-D-411) and Utility Shaft (formerly Exhaust Shaft) (15-D-412).



Transuranic waste shipments arrive at the Waste Isolation Pilot Plant in Carlsbad, New Mexico

### Los Alamos (\$192M)

- Planning for retrieval and repackaging of the below-grade transuranic waste
- Continues execution of New Mexico Environment Department approved groundwater remedies for the high explosives plume in Cañon de Valle (RDx)
- Continue activities for Chromium plume investigation through modeling and hydrology studies, installation of extraction and injection wells, and interim measure activities progression towards an approved Corrective Measures Evaluation.

#### Recent Accomplishments

- Completed cleanup of the final two known legacy sites in the Los Alamos townsite (FY 2017).
- Complete Remediated Nitrate Salt processing (FY 2018).



Chromium project extraction wells at Los Alamos, New Mexico

### Sandia (\$3M)

- Continues field work for implementation of groundwater interim measures



## New York (\$81M)

### West Valley (\$64M)

- Complete decommissioning of the Main Plant Process Building and begin demolition
- Continue removal of excess ancillary facilities
- Begin off-site Rail Line repair and maintenance

#### Recent Accomplishments

- Accelerated offsite legacy waste shipments, completing 25 shipments in 2017.
- Completed removal of all legacy waste from the Main Plant Process Building (including 241 drums of transuranic waste) (FY 2017).
- Complete deactivation and commence demolition of the Main Plant Process Building (FY 2018).

### Brookhaven (\$2M)

- Continues planning activities for the High Flux Beam Reactor stack demolition

### Separations Process Research Unit (SPRU) (\$15M)

- Supports completion of verification sampling; contractor demobilization and closeout activities associated with returning the land and facilities to the site landlord, Naval Reactors
- Supports initiation of procurement actions to transport and treat Separations Process Research Unit transuranic waste, return and provide interim storage

#### Recent Accomplishments

- Completed the open-air demolition of the G2 Building and began the process of backfilling (FY 2017).
- Completed decommissioning and decontamination of the H2 Building in preparation for open air demolition (FY 2017).



Main Plant  
Process Building  
at West Valley



High Flux Beam  
Reactor Stack at  
Brookhaven



Demolition of  
above-ground  
portions of  
Building G2 at  
SPRU

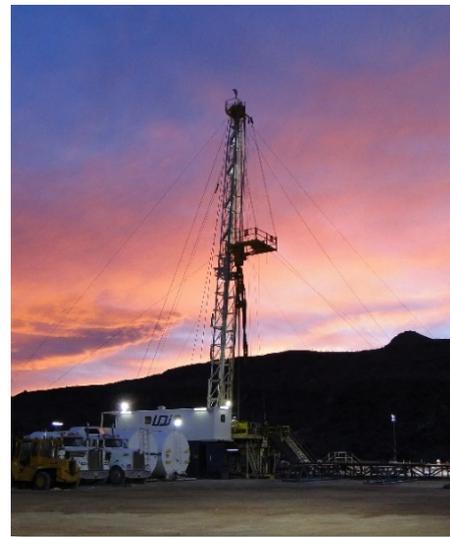
## Nevada (\$60M)

### Nevada National Security Site

- Continues soil and groundwater remediation activities
- Continues disposal operations for low-level and mixed low-level Waste

#### Recent Accomplishments

- Disposed more than 900,000 ft<sup>3</sup> of classified, low-level, and mixed low-level radioactive waste at the Area 5 Radioactive Waste Management Site (FY 2017).
- Commenced cleanup of the historic Clean Slate II site on the Tonopah Test Range (FY 2017).



Groundwater Well Drilling

## Utah (\$35M)

### Moab

- Continues excavation, transportation and disposal operations
- Continues groundwater monitoring

#### Recent Accomplishments

- Exceeded 2017 goal of shipping 450,300 tons of uranium mill tailings by 8,600 tons (FY 2017).
- Extracted almost 8.4 million gallons of contaminated groundwater from wells, preventing contaminants from reaching the Colorado River (FY 2017).



Locomotive transports sealed containers of tailings from Moab to a disposal site



## California (\$10M)

### Energy Technology Engineering Center (\$8M)

- Complete the required Corrective Measures Study to support final recommendations regarding groundwater
- Complete the Groundwater Interim Measures for areas that exceed 1000 ppb for trichloroethylene.
- Complete planning for the Programmatic Agreement needed to support the requirements of the National Historic Preservation Act

***Recent Accomplishments***

- Complete Final Environmental Impact Statement and decontamination and decommissioning planning of remaining structures and soil remediation (FY 2018).

### Lawrence Livermore National Laboratory (\$2M)

- Supports the development of remedial solutions for contamination at Building 812, Building 850, and Building 865

***Recent Accomplishments***

- Finalize the Focused Remedial Investigation/Feasibility Study for perchlorate contamination at Building 850 (FY 2018).



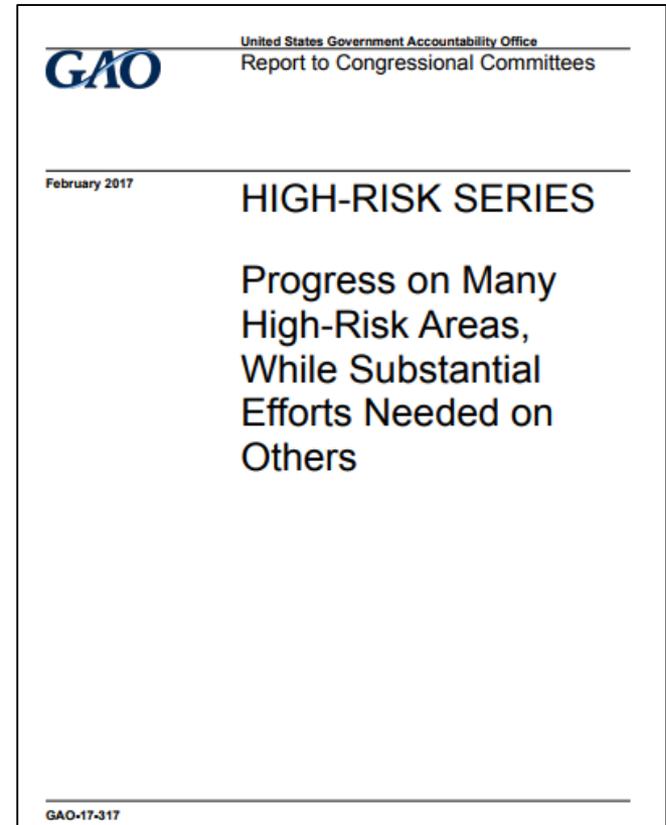
Energy Technology Engineering Center



Lawrence Livermore National Laboratory

- Spring formulation guidance from OMB to CFO to EM (pending)
- HQ/Field planning workshop (last month) provided the information for EM to begin formulation over the next few months
- Site Manager presentations to EM-1 this month
- Preparing EM recommendations to the Secretary in early June
- Department will submit its request to OMB in September
- Passback from OMB occurs in November
- The President's Budget goes to Congress in February 2019

- GAO added a new high risk area in 2017: Environmental Liability
- The EM Environmental Liability is the estimated cost for DOE to meet its present environmental cleanup obligations, including all work required to complete cleanup of facilities; remediation of soil and groundwater; and management and disposition of wastes, spent nuclear fuel, and surplus nuclear materials managed by EM.
- EM annually updates its EL estimate prior to recording this amount in DOE's Consolidated Financial Statements.



# Near-Term Planning & Budget Activities

- Currently developing life-cycle planning profiles.
  - Establish realistic cost and schedule expectations for each site and document underlying assumptions/basis.
  - Provide improved basis for measuring progress and evaluating alternative cleanup approaches.
  
- Expand HQ-Field EM planning and budget alternatives analysis.
  - Continue planning and budget workshops
  - Update/life-cycle planning profiles
  - Provide essential input for update EM Program long-term strategy
  - Support Administration transition

