

Office of Packaging & Transportation Overview for Midwestern Radioactive Materials Transportation Committee (MRMTC)

Ellen Edge

TEPP and NTSF Lead, Office of Packaging & Transportation

October 8, 2024

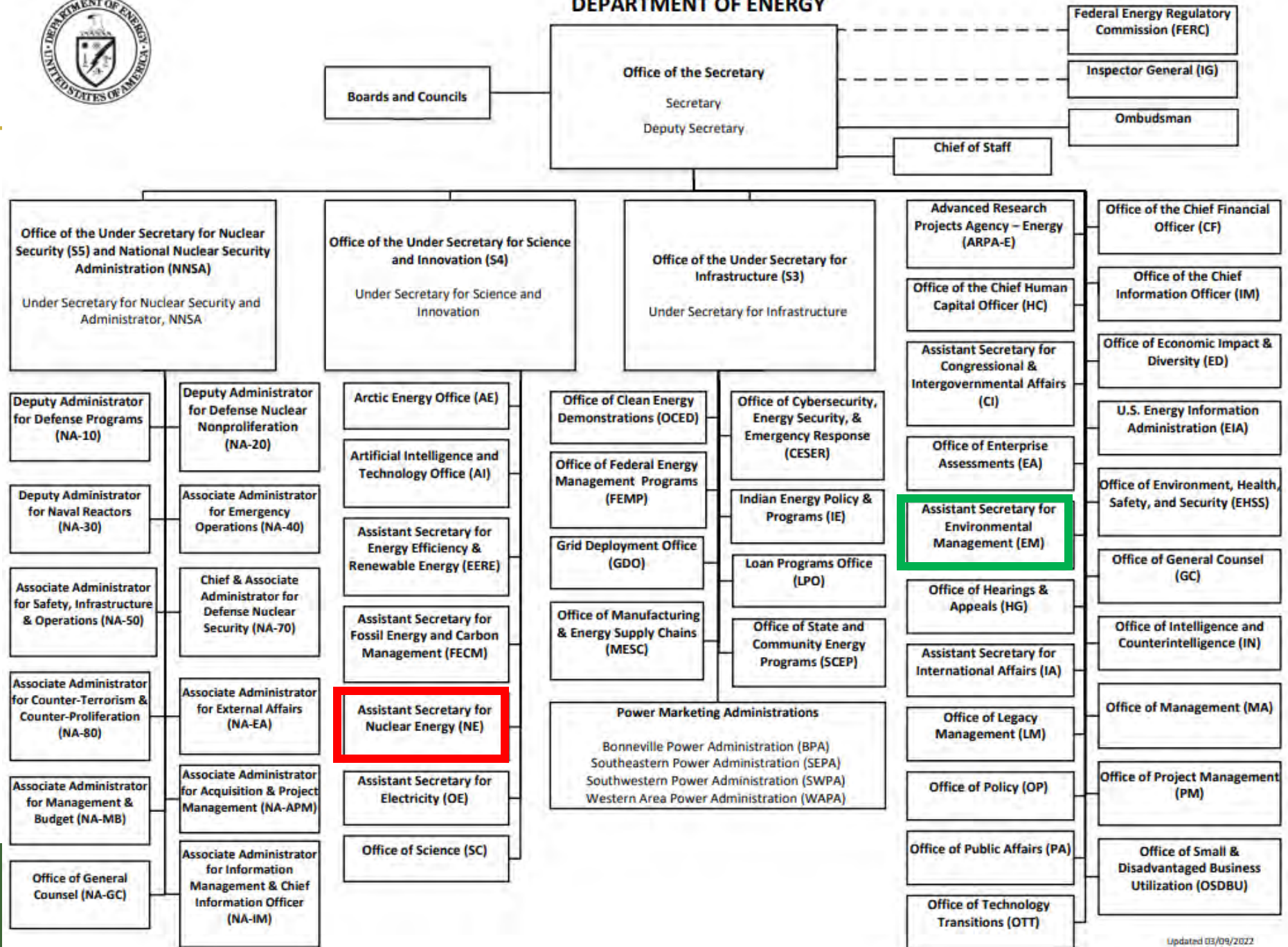


U.S. DEPARTMENT OF
ENERGY

OFFICE OF
**ENVIRONMENTAL
MANAGEMENT**



DEPARTMENT OF ENERGY

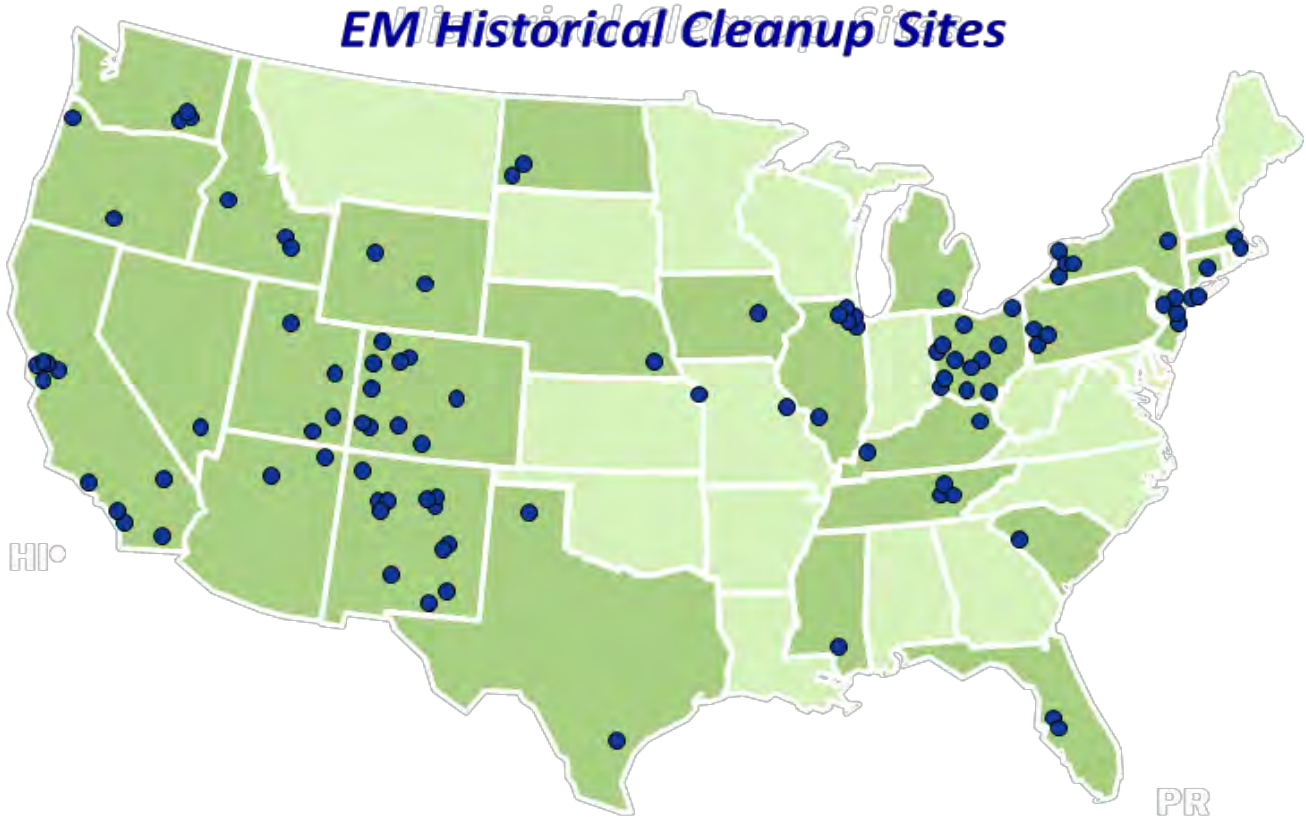


Environmental Management's Mission

To complete the safe cleanup of the environmental legacy brought about from decades of nuclear weapons development and government-sponsored nuclear energy research. EM's priority is to ensure the safety and health of the public and EM's workforce while continuing to protect the environment.



107 Original EM Cleanup Sites



A Proven Record of Cleanup Results

15 Remaining Cleanup Sites



Since 1989, DOE has completed its cleanup mission at 92 of the 107 major nuclear weapons and nuclear research sites.

Operating DOE & Commercial Disposal Facilities

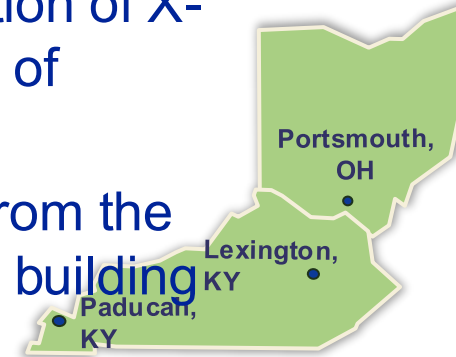


- All waste is disposed in accordance with each waste disposal facility's WAC.
- Each waste disposal site is licensed to dispose of specific waste types (see map below for examples).

Portsmouth/Paducah Project Office (PPPO)

Progress

- Portsmouth - completed waste placement of 163K cubic yards from the demolition of X-326 Process Building in the On-site Waste Disposal Facility (22 months ahead of schedule and \$30M under budget)
- Paducah - removed an additional 1M pounds of hazardous R-114 Refrigerant from the site; began converter segmentation and bundle crushing for the C-333 process building deactivation



Portsmouth/Paducah Project Office (PPPO)

Progress

- Paducah and Portsmouth - began the first offsite shipment of depleted uranium hexafluoride (DUF6) from both sites' DUF6 conversion plants via multi-car rail shipments for disposal at a licensed facility

Upcoming Work

- Portsmouth and Paducah - work toward advancing deactivation and demolition projects at both sites to transfer land back to the community for future reuse



Office of Packaging and Transportation



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 Jeff Baran
Deputy Assistant Secretary

National TRU Program
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 Justin Marble, *Director*

Waste Disposal
EM-4.22
 Vacant, *Director*

Nuclear Materials
EM-4.23
 Jomaries Rovira, *Director*

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Principal Deputy Assistant Secretary EM-2
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Field Site Managers

- Carlsbad
- Idaho
- Los Alamos
- Oak Ridge
- Office of River Protection
- Portsmouth & Paducah
- Richland
- Savannah River Site

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 Kevin Witt, *Director*

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National TRU Program
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 Justin Marble, *Director*

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Acquisition & Project Management
EM-5.2
 Angela Watmore
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Acquisition & Contract Management
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 Amber Gray, *Director*

Project Management
EM-5.22
 Rodney Lehman, *Director*

EM Consolidated Business Center (EM CBC)

Site Operations



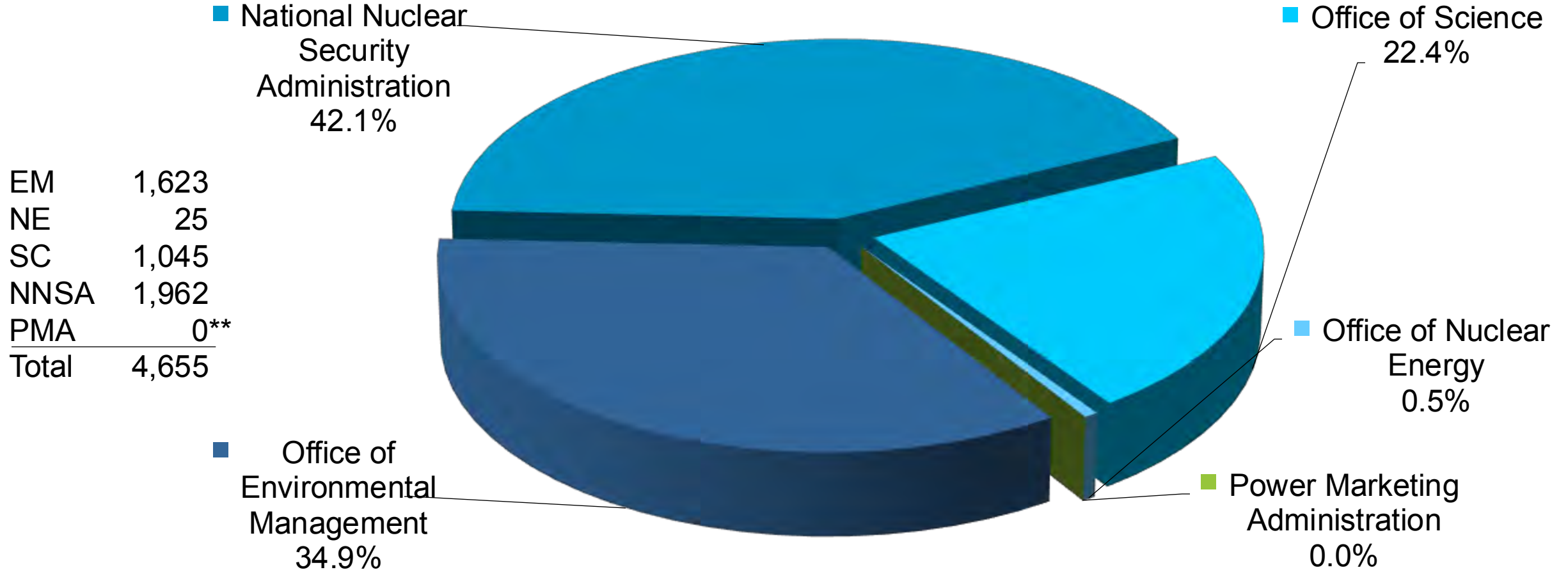
September 8, 2024

OPT Mission

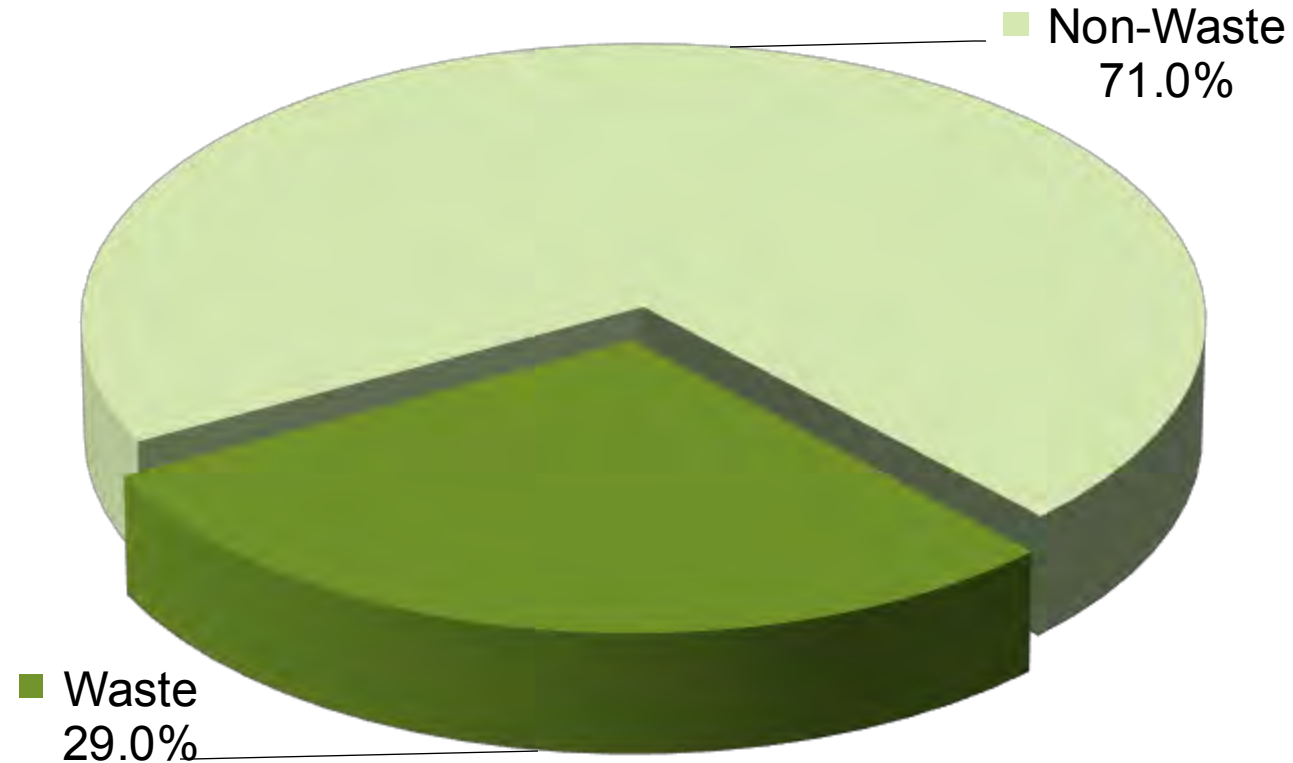
The Office of Packaging and Transportation (OPT) protects people and the environment by ensuring safe, compliant and efficient packaging and transportation of materials. We achieve this mission by conducting packaging and transportation assessments and oversight; assisting field sites; and developing and managing policies, guidance and tools in accordance with DOE requirements and government regulations.



FY24 DOE Offsite HAZMAT Shipments by Program*



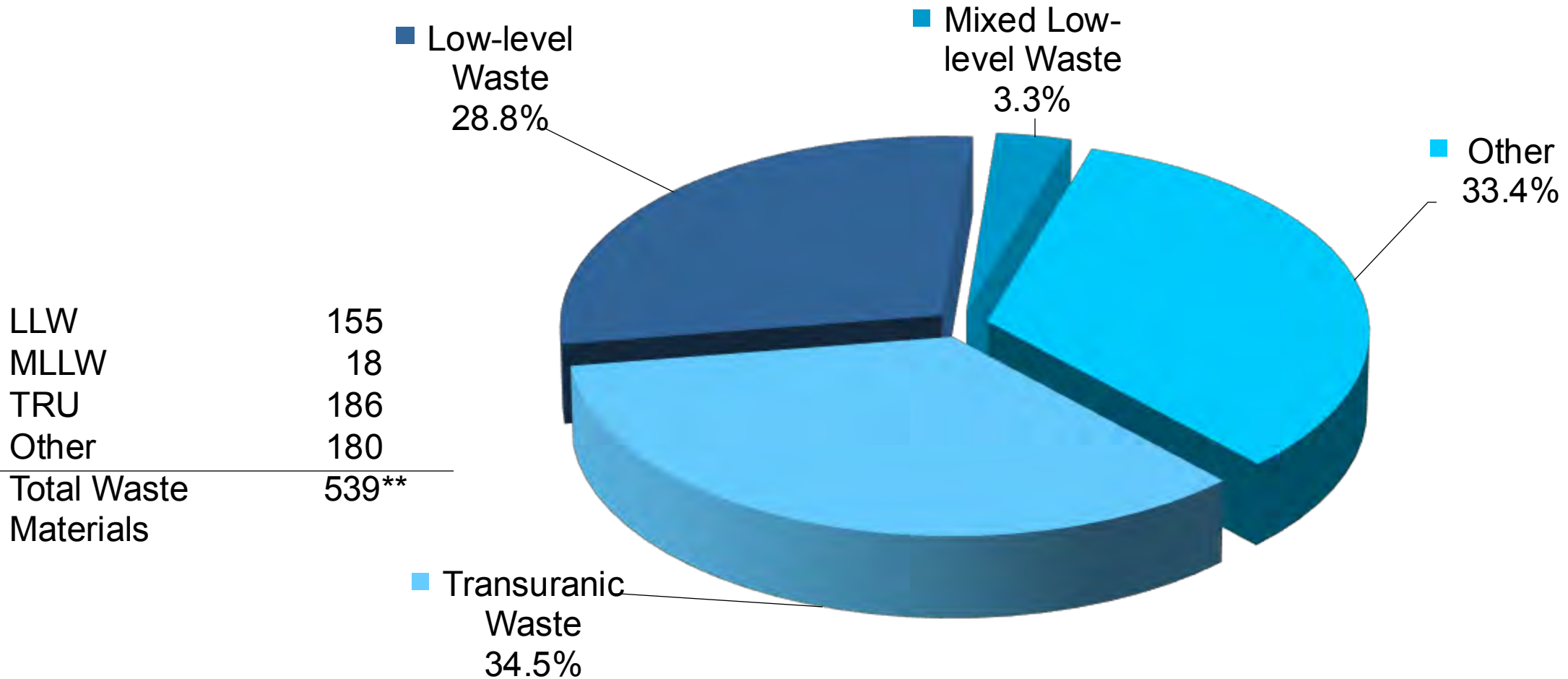
FY24 EM Offsite HAZMAT Shipments



Waste	474
Non-Waste	1,158
Total	1,632**

**One shipment may contain both waste and non-waste

FY24 EM Offsite HAZMAT Waste Materials* Shipped



OPT Key Programs & Responsibilities

- Compliance and safety
 - Motor Carrier Evaluation Program (MCEP); 30+ carriers
 - Transportation Compliance Assurance Program (TCAP) for DOE sites
- Packaging Certification Program (PCP)
 - Supported by specialized teams at DOE National Laboratories
 - Type B package Certificates of Compliance and revisions
 - Accredited, graduate-level courses in packaging and transportation
 - RFID technology and transportation security innovations
- Partner engagement and training
 - Transportation Emergency Preparedness Program (TEPP)
 - National Transportation Stakeholders Forum (NTSF)

OPT Key Programs & Responsibilities

- Transportation planning and management tools
 - ATLAS – transportation management
 - RadAnalysis (formerly RADCALC) – shipping calculations
 - TRAGIS – transportation routing
- Field support
 - Program support for site transportation managers
 - Transportation Management Council; Packaging Management Council
- Policy and regulatory support
 - DOE Orders 460.1 and 460.2
 - Primary interface with other federal agencies on transportation matters

National Transportation Stakeholders Forum (NTSF)

- DOE's primary mechanism to communicate with States and Tribes about shipments of radioactive material
- EM solicits State and Tribal input for shipment planning and execution
- Chaired by EM-OPT



National Transportation Stakeholders Forum (NTSF)

- OPT provides funding for NTSF with additional funding and participation from the Office of Nuclear Energy (NE)
- Cooperative agreements with four State Regional Groups (SRGs) and the Tribal Radioactive Materials Transportation Committee (TRMTC)
- Annual meetings are hosted in rotation among the SRGs and TRMTC.
- Public website: <https://www.ntsfc.info/>

TRMTC hosted the 2024 Annual Meeting in Denver, CO.

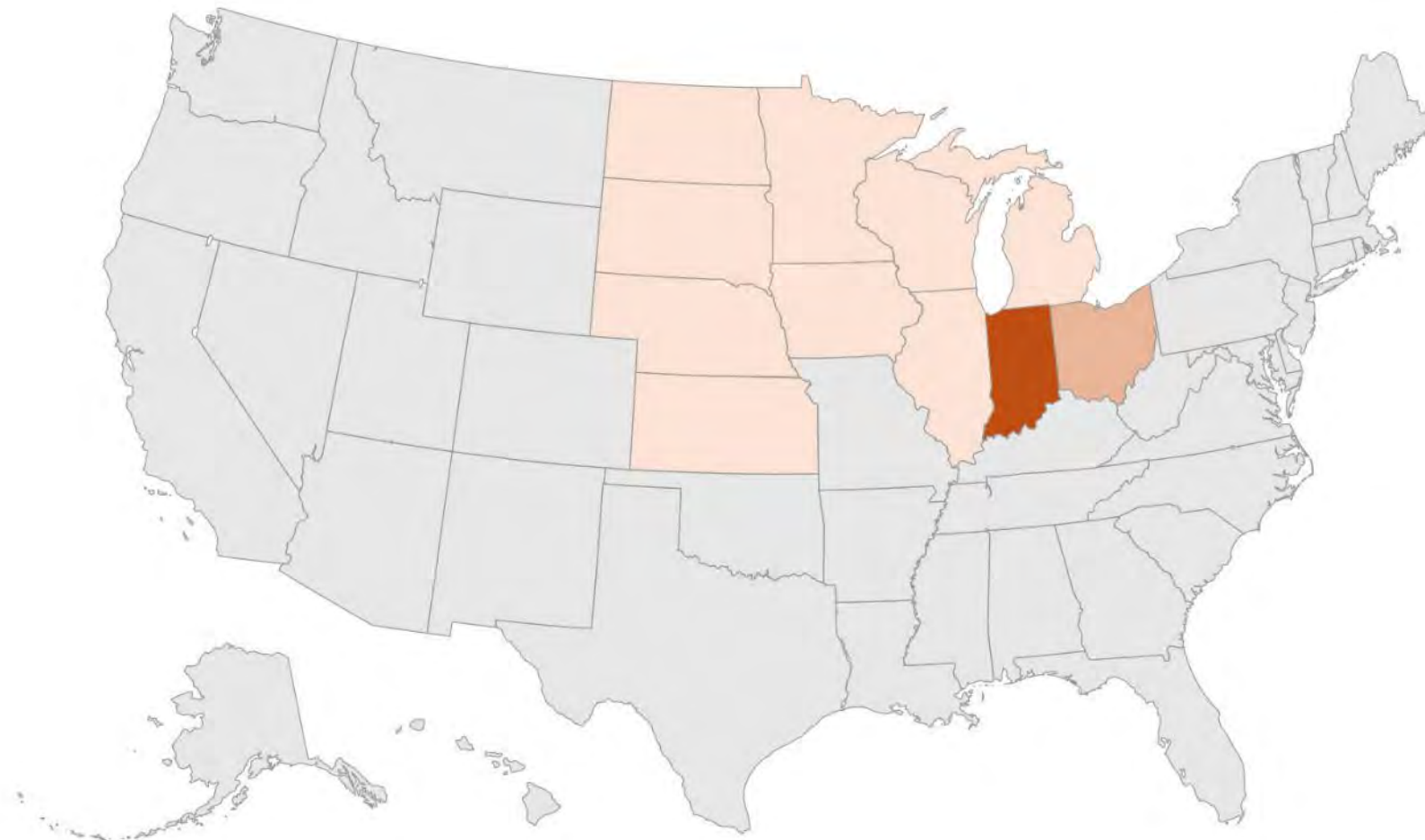


Transportation Emergency Preparedness Program (TEPP)

- Provides tools for planning, training and exercises, and technical assistance to State and Tribal authorities to prepare for transportation incidents involving DOE radioactive material shipments
- First responder training provided at no cost to jurisdictions along DOE shipping routes
- FY24 training conducted in 20 states
 - 2140 students, 136 courses



TEPP Training in the Midwest



Illinois	0
Indiana	45
Iowa	0
Kansas	0
Michigan	0
Minnesota	0
Nebraska	0
North Dakota	0
Ohio	14
South Dakota	0
Wisconsin	0

Contacts

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Hanford



Progress

- Tank-Side Cesium Removal System (TSCR) operations.
- Protective enclosure, or “cocoon,” around K East Reactor.
- Construction of new water treatment plant.



Hanford



Upcoming Work

- Direct-Feed Low-Activity Waste commissioning activities for the Waste Treatment Plant Low-Activity Waste Facility
- Upgrades at the Liquid Effluent Retention Facility and Effluent Treatment Facility
- Complete characterization, dewatering, and grouting of the K West Basin



Savannah River Site



Progress

- Processed approximately 7 million gallons of waste at the Salt Waste Processing Facility (SWPF) in just over 3 years of operation.
- Completed construction of Saltstone Disposal Unit (SDU) 8.



Savannah River Site



Progress

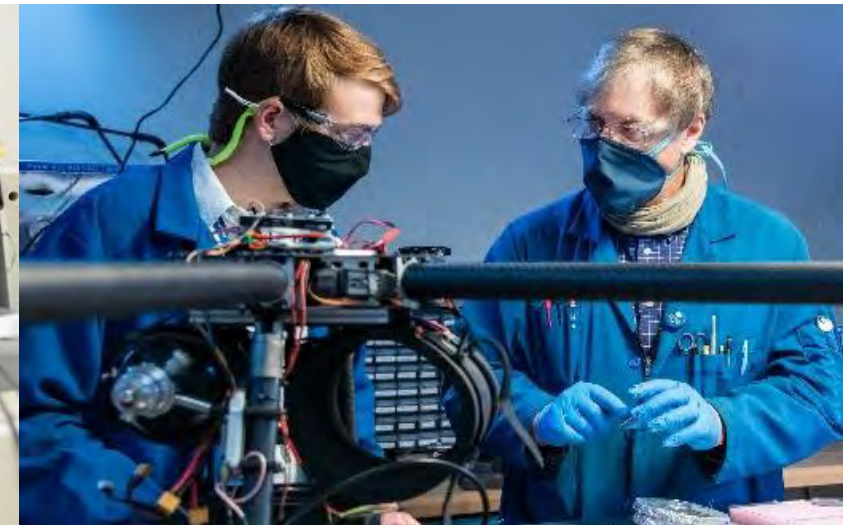
- Began acceptance of highly enriched uranium-235 from L-Basin as part of the Accelerated Basin De-Inventory campaign.
- Transition primary authority for the Savannah River Site from EM to National Nuclear Security Administration.



Savannah River National Laboratory

Progress

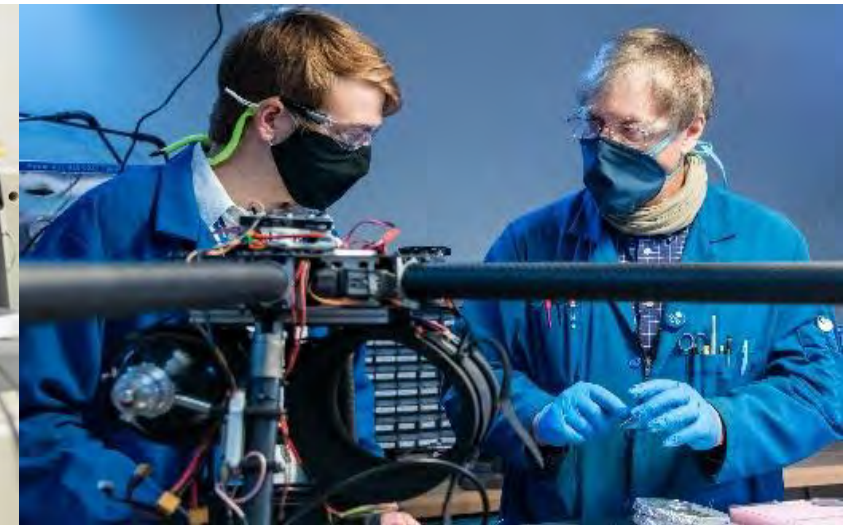
- Crews placed the last piece of structural steel on the 60,000-square foot Advanced Manufacturing Collaborative being constructed on the University of South Carolina-Aiken campus. The 60,000-square-foot facility will provide a new laboratory, office, and conference space suitable for advanced manufacturing research and development.



Savannah River National Laboratory

Progress

- SRNL completed the installation of the Advanced Long Term Environmental Monitoring System (ALTEMIS) sensor network in the F-Area Seepage Basin for long-term monitoring and data collection, a system designed to move from reactive to proactive monitoring at Savannah River Site.



Oak Ridge

Oak Ridge,
Tennessee

Progress

- Finished demolition on two former reactor facilities in the heart of ORNL.
- Processing and disposing of the high dose inventory of U-233 stored at ORNL.
- Initiated early site preparations for the Environmental Management Disposal Facility.



Oak Ridge

Oak Ridge,
Tennessee

Upcoming Work

- Begin demolition on Alpha-2, a former Manhattan Project enrichment facility, at Y-12.
- Finish soil remediation at the East Tennessee Technology Park.



Idaho Cleanup Project



Progress

- Started radiological operations at the Integrated Waste Treatment Unit processing over 68K Gallons of Sodium Bearing Waste
- Decontamination and demolition (D&D) four Accelerated Retrieval Project (ARP) structures in preparation for the construction of the Subsurface Disposal Area (SDA) cap
- Completed 48% of D&D of the S1W facility and commenced D&D activities at A1W



Idaho Cleanup Project



Upcoming Work:

- Complete D&D of three remaining ARP structures and begin construction of SDA Cap
- Finish construction of the Idaho CERCLA Disposal Facility expansion
- Complete processing of sodium-bearing waste and close Idaho Nuclear Technical and Engineering Center tank farm facilities
- Begin packaging spent nuclear fuel into road ready containers
- Complete D&D of the S1W, S1W and S5G prototype reactors



Los Alamos



Progress

- Exceeded EM goal for transuranic waste shipments to Waste Isolation Pilot Plant for the last 3 years
- Finished investigation and soil remediation for 2 legacy cleanup campaigns
- Completed field work for Middle DP Road Site – a key cleanup project for Los Alamos County economic development
- Implemented EM Los Alamos Field Office Strategic Vision initiative to obtain input from pueblos, stakeholders and the public for remaining legacy cleanup projects



Los Alamos



Upcoming Work

- Complete below-ground retrieval and size-reduction of 158 corrugated metal pipes of cemented transuranic waste
- Perform site characterization and soil remediation at 5 Aggregate Areas within watersheds or canyons at Los Alamos National Laboratory



West Valley Demonstration Project

West Valley,
New York



Progress

- Safely solidified 600,000 gallons of high-level liquid radioactive waste into 278 steel canisters, removed from the former reprocessing plant, loaded into 56 vertical storage casks, and stored onsite awaiting a final disposition path
- Removed 69 buildings and shipped 2.8 million cubic feet of low-level waste off-site for disposal
- Started the controlled demolition of the Main Plant Processing Building in September 2022



West Valley Demonstration Project

West Valley,
New York



Upcoming Work:

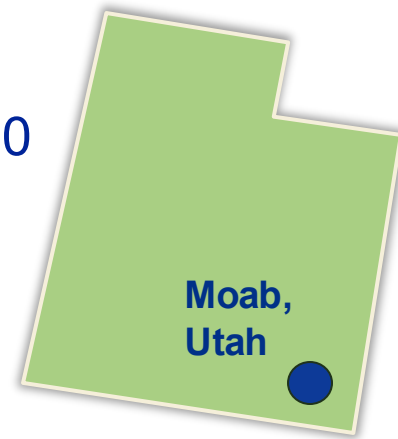
- Complete the controlled demolition of the Main Plant Process Building
- Install polyethylene weather protective cover over the Main Plant concrete slab for added environmental protection



Moab Uranium Mill Tailings Remedial Action Project

Progress

- Disposed of over 14 million tons of contaminated soil and debris out of the approximated 16-million-ton tailings pile
- Removed a cumulative total of more than 980,000 pounds of ammonia and 5,600 pounds of uranium from groundwater
- Final expansion phase of the Crescent Junction disposal cell was completed
- Completed demo and removal of the Atlas Building
- Remediated and removed 14 autoclaves



Moab Uranium Mill Tailings Remedial Action Project

Upcoming Work

- Groundwater Compliance Action Plan field study investigations with National Labs
- Approval of Evapotranspiration (ET) Cover Design
- Move an additional 1 million tons of tailings



Nevada National Security Site

Progress:

- Environmental restoration at approximately 900 former underground test locations, approximately 100 surface or near-surface soil contamination locations, and more than 1,000 industrial-type sites.
- Obtained regulatory approval of the corrective action plan for the Pahute Mesa groundwater region – the last active groundwater corrective action area at the NNSS.
- Safely disposed of approximately 600,000 cubic feet of low-level waste (LLW), mixed low-level waste (MLLW), and classified waste transported to the NNSS.



Nevada National Security Site

Upcoming Work:

- Complete the evaluation phase for Pahute Mesa groundwater region.
- Conduct demolition and closure of the Engine Maintenance, Assembly, and Disassembly (EMAD) and the Test Cell C (TCC) complexes.



Energy Technology Engineering Center (ETEC)

Progress

- Completed remediation and demolition of the last 18 DOE-owned buildings
- Collected 105,000+ endangered Braunton's Milk-vetch seeds with U.S. Fish and Wildlife for preservation and future revegetation.
- Continued ongoing groundwater interim measures, reducing volatile organic compound impacted groundwater concentrations by 10,000 ppb in 2017 to < 500 ppb in 2023.



Energy Technology Engineering Center (ETEC)

Upcoming Work

- Automate groundwater pumping in 2024 to continue interim measures.
- Finalize the Groundwater Corrective Measures Study and, following state regulatory approval, commence implementation of the 2020 Record of Decision for Groundwater Remediation.
- Finalize the cleanup of Area IV and the Northern Buffer Zone with the state of California, including next steps for cleanup of soils.



Lawrence Livermore National Laboratory

Progress

- Continued the Building 280 Pool-Type Reactor Demolition Project activities.
- Continued Building 251 Demolition to Slab project activities, an EM 2023 priority.
- Continued the Legacy Slab 377 Slab and Soil removal project.
- Commenced the Legacy Slab 412 Slab and Soil removal project.
- Completed the Legacy Slab 175 Slab and Soil predemolition activities.



Lawrence Livermore National Laboratory

Upcoming Work

- Commence the Building 175 slab and soil removal project.
- Commence the Legacy Slab 175 Slab and Soil removal project.
- Commence Building 212 hazard removal activities



Lawrence Berkeley National Laboratory

Progress

- Commenced the Old Town Demolition (OTD) Phase VI Project which removes the Building 4 and 14 slabs, underground structures and associated contaminated soil to provide for a buildable site for future mission use.
- Continued Excess Facility Demolition planning activities for Bayview Buildings 56 and 64.



Lawrence Berkeley National Laboratory

Upcoming Work

- Continue Excess Facility Demolition planning activities for Bayview Buildings 56 and 64.
- Commence planning activities for Building 71 complex work, including removal of Building 71A, removal of 8 office trailers, and develop a demolition scope for Building 71.



EMCBC-NY (formerly SPRU)



Progress

- Twenty-four containers of suspect transuranic (TRU) waste from the Separations Process Research Unit (SPRU) project are being evaluated for commercial characterization and processing.
- Renamed the SPRU field office as the Environmental Management Consolidated Business Center (EMCBC) New York (NY) Project Support Office
- 8A Contractors are conducting decontamination and decommissioning work for Naval Reactors at Knolls Atomic Power Laboratory and Kesselring sites.



EMCBC-NY (formerly SPRU)

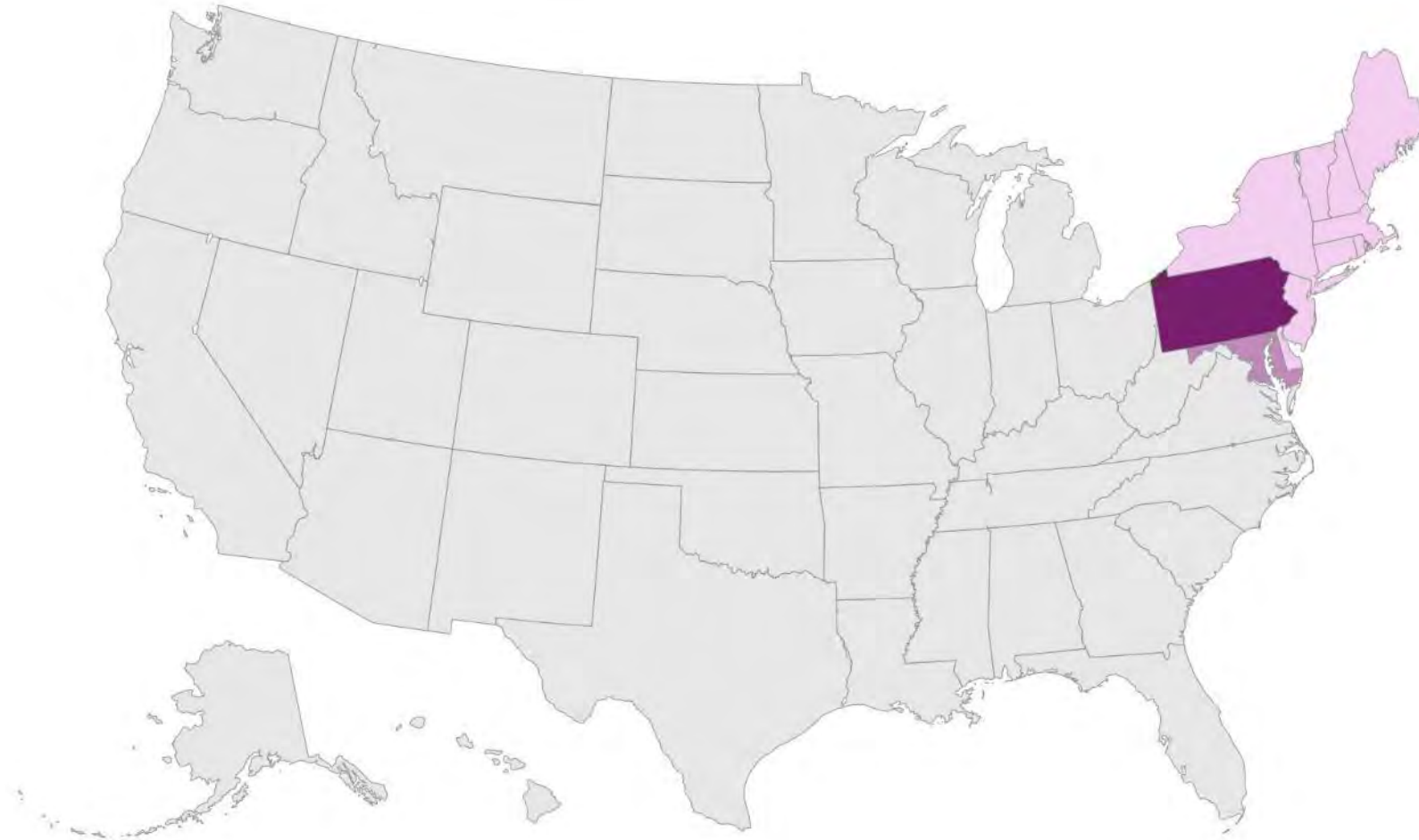


Upcoming Work

- Future budget requests and carryover support continued storage and disposition of remaining suspect TRU waste
- Site to begin commercial processing of suspect TRU waste in FY2023/2024.
- EM and Naval Reactors signed memorandum of agreement for EM to conduct D&D and environmental remediation at Naval Nuclear Laboratory Sites.

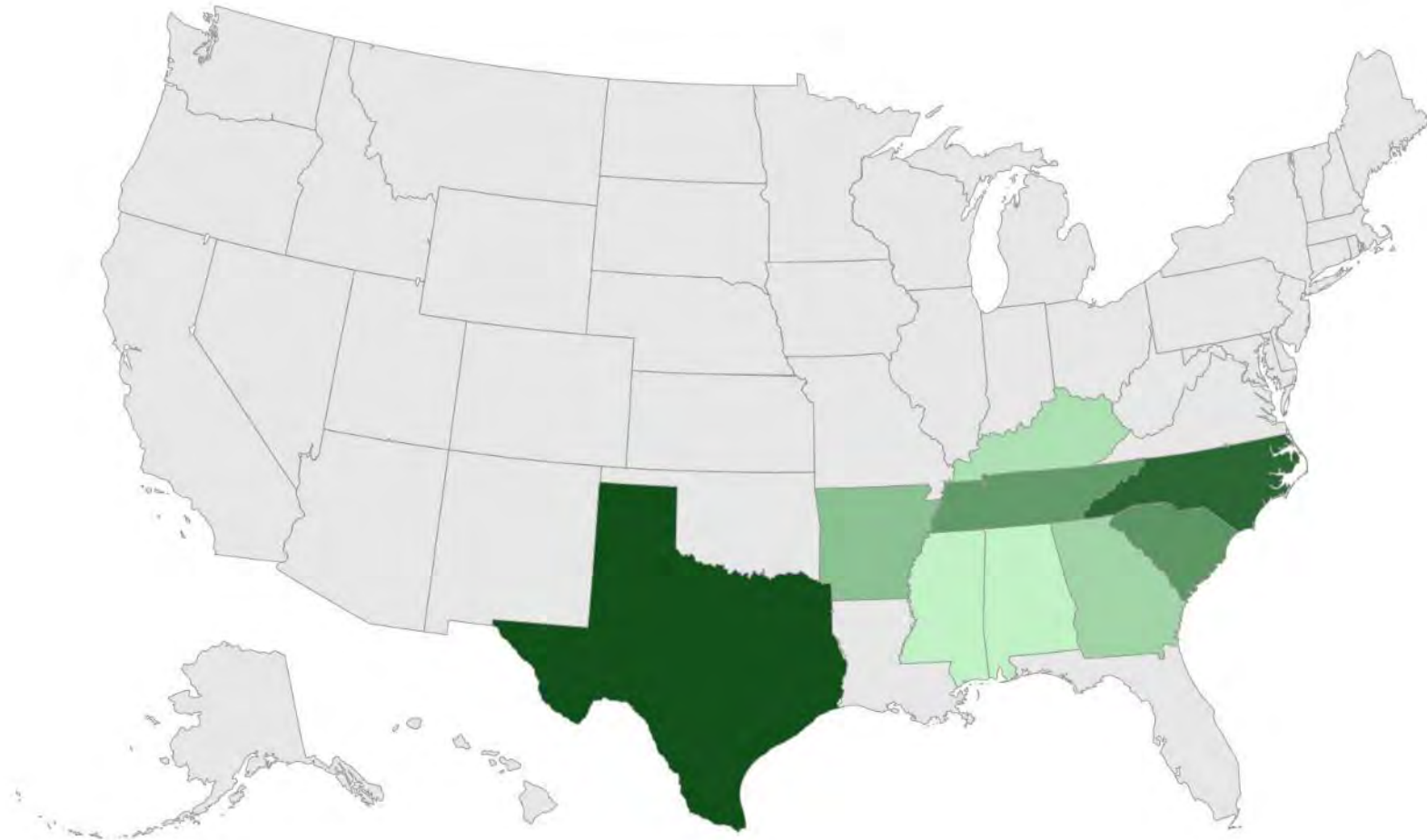


TEPP Training in the Northeast

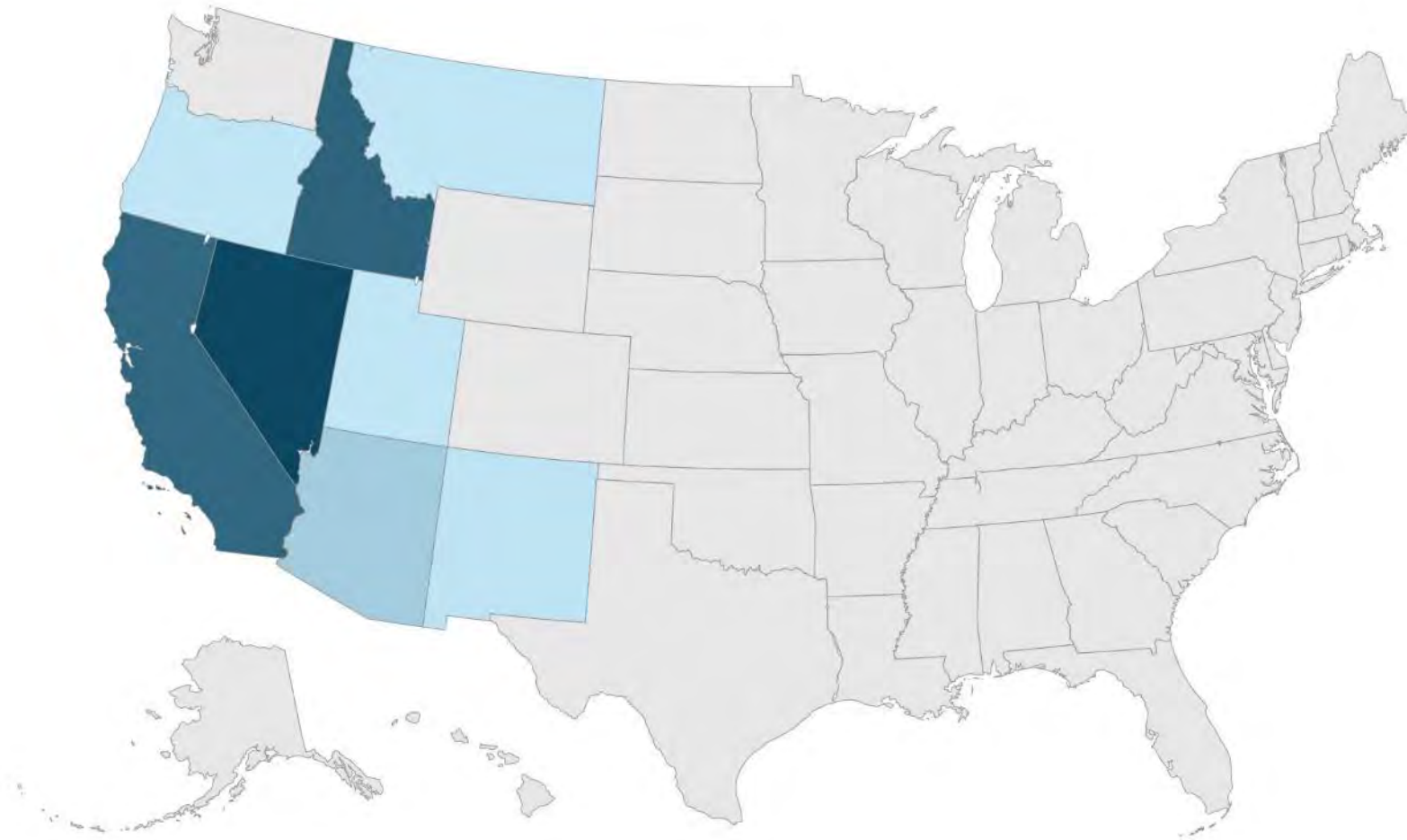


Connecticut	0
Delaware	0
Maine	0
Maryland	98
Massachusetts	0
New Hampshire	0
New Jersey	0
New York	0
Pennsylvania	248
Rhode Island	0
Vermont	0

TEPP Training in the South



TEPP Training in the West



Alaska	0
Arizona	29
California	139
Colorado	0
Hawaii	0
Idaho	144
Montana	0
Nevada	175
New Mexico	2
Oregon	0
Utah	0
Washington	0
Wyoming	0