Transportation in Environmental Cleanup

Joanne Lorence
Office of Packaging and Transportation
Office of Environmental Management

Fall Meeting
Southern States Energy Board
Discussion Topics

- Environmental Management Cleanup
  - Site Information
  - Waste Stream Information
  - Transportation Activities
- Organization of the Office of Environmental Management
  - New Structure
- Update on the Office of Packaging and Transportation
  - Mission
  - Core Values
  - Activities
Environmental Management Cleanup
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:
EM’s FY 2018 Budget Request - $6.508 Billion Total

<table>
<thead>
<tr>
<th>Category</th>
<th>Budget Requests</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radioactive Tank Waste</td>
<td>$2,403M</td>
<td>37%</td>
</tr>
<tr>
<td>TRU &amp; Solid Waste</td>
<td>$832M</td>
<td>13%</td>
</tr>
<tr>
<td>Facility D&amp;D</td>
<td>$1,170M</td>
<td>18%</td>
</tr>
<tr>
<td>Soil &amp; Groundwater</td>
<td>$474M</td>
<td>7%</td>
</tr>
<tr>
<td>Site Services</td>
<td>$1,089M</td>
<td>17%</td>
</tr>
<tr>
<td>Special Nuclear Materials &amp; Spent Nuc Fuel</td>
<td>$540M</td>
<td>8%</td>
</tr>
</tbody>
</table>

Savannah River
Richland
Paducah
Portsmouth
Oak Ridge
Idaho

River Protection
Savannah River
Idaho

Carlsbad/WIPP
Idaho
Richland
Los Alamos
Oak Ridge
Nevada

Richland
Portsmouth
Oak Ridge
Paducah
Savannah River
West Valley

Richland
Savannah River
Idaho
Moab
Los Alamos
Nevada

All Sites
EM has reduced its footprint by 90% to less than 300 square miles
• 16 sites in 11 states with remaining cleanup activities
Workers load a container of lead from legacy missions at the Savannah River Site onto a truck to transport to a waste disposal site in Texas.

The Shielded Canister Transporter enters the glass waste storage facility.
• Completed 13 contact-handled (CH) waste shipments to the Waste Isolation Pilot Plant (WIPP) to date

• Shipped 80 of 238 drums of accumulated Nuclear Fuel Services, Inc. low-level waste soils to a federal site.

OR employees celebrate first shipment to WIPP
Portsmouth/Paducah Project Office

Paducah environmental/waste management operations:

- Paducah continues to reduce risks and hazardous and radiological inventories:
  - Loaded and shipped 8 gondolas of waste from the C-400 Cleaning Building deactivation.
    ~ 4 gondolas of waste planned to ship in the next 6 months.
  - 22 cold traps currently stored onsite will be dispositioned and shipped offsite in FY 2018.
Joel Bradburne, former Portsmouth Site Lead, is the new Portsmouth/Paducah Project Office Deputy Manager for DOE-EM.

Portsmouth environmental/waste management operations:

- 1,737 m³ of legacy and newly generated LLW & MLLW to be dispositioned in FY18.
  - Plan to ship remaining fluorine inventory from site during FY18.

- PORTS continues to reduce its hazardous chemical inventory:
  - 6 shipments complete (approximately 90%) of ~204,000 lbs. of refrigerant removed.
  - Remaining 6% (~20 lbs.) of ClF³ (chlorine trifluoride) located in the X-710 Lab will be transferred to new bottles, scheduled for shipment in FY18.
FY17 EM Offsite HAZMAT Shipments by Program

- EM: 74% (5,743)
- NE: 5% (401)
- SC: 3% (278)
- NNSA: 18% (1,369)
FY17 EM Offsite HAZMAT Shipments by Material

- **Low Level Waste (LLW)**: 4,108
- **Mixed Low Level Waste (MLLW)**: 285
- **Transuranic (TRU)**: 107
- **Other**: 1,161
- **Hazardous Material (Haz)**: 82
EM Organization
Update on the Office of Packaging and Transportation
Our Mission

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

Packaging Certification
- Certificates of Compliance
- DOE Exemptions
- DOT Special Permits
- Quality Assurance
- RAMPAC
- Transportation Safeguards & Security
- Graduate level packaging courses

Outreach and Emergency Preparedness
- NTSF
- State Regional Groups
- Tribes
- TEPP
- Prospective Shipment Report
- Fact Sheets

Regulations & Standards Support
- Domestic Federal Agencies
- International Community
- Nongovernmental Organizations
- DOE Orders, Policy, Guidance

Transportation Risk Reduction
- Motor Carrier Evaluations
- Physical Protection
- Transportation Compliance Reviews
- Safety Metrics

Program & Site Support
- DOE/Contractor Interfaces
- TMC
- PMC
- EFCOG
- Tender Negotiations
- Automated Systems
- Field Calls
Packaging Certification Portfolio

- Performs seven major functions
- In FY-17, work-in-progress- 15 packaging dockets
  - 17 dockets open at start of FY
  - 51 dockets closed
  - 50 new dockets opened
- 15 Certificates of Compliance issued during FY-17
National Transportation Stakeholders Forum

National Transportation Stakeholders Forum (NTSF) shares information and collaborates with state, tribal, and other federal agencies along transportation routes.
Transportation Emergency Preparedness Program

- TEPP Spanish language videos are complete
  - Developing written Modular Emergency Response Radiological Transportation Training curriculum
- Website re-design near completion
- Stand-up TEPP Working Group with NTSF
- Training available to local Tribes

Outreach & Emergency Preparedness
## TEPP: 2017 Training Activities

<table>
<thead>
<tr>
<th>Region</th>
<th># Classes</th>
<th>TTT</th>
<th>Full</th>
<th>CMERRTT</th>
<th>Partial</th>
<th>TMERRTT</th>
<th>RAD Specialist</th>
<th>Hospital</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>WGA</td>
<td>30</td>
<td>2</td>
<td>144</td>
<td>129</td>
<td>107</td>
<td>0</td>
<td>38</td>
<td>0</td>
<td>450</td>
</tr>
<tr>
<td>SSEB</td>
<td>64</td>
<td>51</td>
<td>208</td>
<td>386</td>
<td>90</td>
<td>128</td>
<td>0</td>
<td>128</td>
<td>1055</td>
</tr>
<tr>
<td>CSG-MW</td>
<td>8</td>
<td>43</td>
<td>2</td>
<td>16</td>
<td>0</td>
<td>0</td>
<td>87</td>
<td>0</td>
<td>156</td>
</tr>
<tr>
<td>CSG-NE</td>
<td>15</td>
<td>0</td>
<td>7</td>
<td>200</td>
<td>1</td>
<td>77</td>
<td>0</td>
<td>0</td>
<td>300</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>117</strong></td>
<td><strong>96</strong></td>
<td><strong>361</strong></td>
<td><strong>731</strong></td>
<td><strong>198</strong></td>
<td><strong>205</strong></td>
<td><strong>125</strong></td>
<td><strong>128</strong></td>
<td><strong>1961</strong></td>
</tr>
</tbody>
</table>

**TTT** – Train the Trainer  
**CMERRTT** – Compressed Modular Response Radiological Transportation Training  
**TMERRTT** – Technician Modular Response Radiological Transportation Training  
**RAD Specialist** – Radiation Specialist  
**Hospital** – Hospital Emergency Department Management of Radiation Accidents Course
Department-wide responsibility for –

- Developing and maintaining three transportation Orders
  - 460.1D -- Packaging and Transportation Safety
  - 460.2B -- Departmental Materials Transportation and Packaging Management
  - 460.3– Security and Physical Protection during Transport
Transportation Risk Reduction

- Motor Carrier Evaluation Program (MCEP)
- Transportation Safety and Operations Compliance Assurance Program (TCAP)
Operational Tools and Assistance

- Packaging Management and Transportation Management Councils
- Energy Facility Contractors Group
- Coordination & Communication Across the Complex
- Automated Tools
  - ATLAS
  - RADTRAN
  - WebTRAGIS

Program and Site Support
Department-wide risk-based program:

- EM Memo approved September 2017 to conduct Independent Assessments
- Developed by DOE Certifying Official
- Authority derived from DOE 460.1D
- FY18 assessments planned at Oak Ridge (completed Oct 17), Idaho, Richland and West Valley
Closing

- Disposition of radioactive material and sources ultimately requires safe, secure, and compliant packaging and transport operations
- DOE maintains excellent performance record for safely, securely, and efficiently transporting materials
- DOE continues to support domestic and international safety and security efforts
Contact for Additional Information

Joanne Lorence, Director & NTSF Chair
EM-4.24/FORS
Office of Packaging and Transportation
U.S. Department of Energy
1000 Independence Avenue, S.W.
Washington, DC 20585
Email: joanne.lorence@em.doe.gov

Ellen Edge, TEPP Program Manager
EM-4.24/270CC
Office of Transportation and Packaging
U.S. Department of Energy
1000 Independence Avenue, S.W.
Washington, DC 20585
Email: ellen.edge@em.doe.gov

Demitrous Blount, NTSF Program Lead
EM-4.24/270CC
Office of Transportation and Packaging
U.S. Department of Energy
1000 Independence Avenue, S.W.
Washington, DC 20585
Email: demitrous.blount@em.doe.gov