Enterprise SRS Initiatives Progress Updates

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Strategic & Legacy Management Committee
December 8, 2014
• Fulfill a Strategic & Legacy Management (S&LM) Committee Work Plan requirement to periodically provide Environmental Management (EM) performance updates.

• Provide a progress updates to Enterprise•SRS Initiatives
**Enterprise•SRS** is the vision to provide innovative solutions to national challenges in the areas of National Security, Clean Energy and Environmental Stewardship while creating a sustainable future for SRS.

Current Environmental Management (EM) and National Nuclear Security Administration (NNSA) missions as well as the Savannah River National Laboratory (SRNL) are critical components of **Enterprise•SRS**.
Critical components of Enterprise SRS

**EM**
- Nuclear Materials Disposition PBS 11C
- Solid Waste Disposition PBS 13
- Safeguards & Security PBS 20
- Savannah River National Laboratory (SRNL) Operations
- Spent Nuclear Fuel Receipt & Storage PBS 12
- Radioactive Liquid Waste Stabilization & Disposition PBS 14
- Soil, Water & Facilities D&D PBS 30

**NNSA**
- Tritium Supply
- Surplus Plutonium Disposition
- Secure Global Materials
SRS Core Competencies

- Transforming legacy nuclear materials into valuable assets and stable waste forms.
  - Unique processing capabilities including H Canyon, Defense Waste Processing Facility (DWPF) and Mixed Oxide Fuel Fabrication (MOX)

- Developing highly innovative approaches to address national nuclear material challenges.
  - Intellectual leadership and research & development (R&D) driven by the Savannah River National Laboratory (SRNL)

- Securing materials to prevent unwanted global proliferation.

- Sustaining the nation’s only tritium supply for our nuclear weapons deterrent.

- Providing economic impact to the region while reducing environmental risk.
Based on lessons learned from two years of Enterprise-SRS “under our belt,” DOE and SRS contractors are sharpening collective efforts by grouping Strategic Initiatives into logical Focus Areas and then prioritizing actions.

- **Focus Areas:**
  - Surplus Nuclear Materials Management
  - Environmental Risk Reduction
  - Next Generation Tritium Supply
  - Global Monitoring & Securing of Nuclear Materials
  - Crosscutting

- **Priorities:**
  - Sponsorship / Funding
  - Ensuring and using available resources
  - Maximizing return on Investment
  - Improving probability of Success
<table>
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<th>Focus Area</th>
<th>Initiatives</th>
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| **Surplus Nuclear Materials Management** | • Disposition of Highly Enriched Uranium  
• Recovery of “National Asset” Isotopes  
• Plutonium Oxide Preparation  
• Plutonium Disposition to Waste Isolation Pilot Plant (WIPP)  
• Domestic & Foreign Research Reactor Receipts  
• Advanced Safeguards Instrumentation Testing |
| **Environmental Risk Reduction** | • Tank Closures  
• Actinide Removal Process (ARP) & Modular Caustic Side Solvent Extraction Unit (MCU) Life Extension  
• Enhanced Throughput  
• Saltstone Disposal Units & Salt Waste Processing Facility (SWPF)  
• SRNL R&D Cleanup Technologies - including In Situ Decommissioning of Reactors & Groundwater remediation |
Focus Area Grouping and Associated Initiatives

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<th>Focus Area</th>
<th>Initiatives</th>
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| **Next Generation Tritium Supply** | • Helium-3 Recovery  
• Tritium Supply |
| **Global Monitoring and Securing of Nuclear Materials** | • Disposition of Canadian Liquid Highly Enriched Uranium (HEU)  
• Americium-241 Recovery  
• Mobile Plutonium Facility  
• FBI Forensic Lab / SRNL  
• SRNL Partnering with Homeland Security / Chemical, biological, radiological, nuclear and explosive (CBRNE) Training  
• SRNL Applied Research / Wireless Technology  
• SRNL Applied Research / Radiation Mapping Technology |
Focus Area Grouping and Associated Initiatives

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<th>Focus Area</th>
<th>Initiatives</th>
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<tbody>
<tr>
<td>Crosscutting</td>
<td>• Teaming with TEPCO (Japanese utility company) on Fukushima Cleanup</td>
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<td>• Partnering with NDA Sellafield (British nuclear decommissioning company)</td>
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<td>• Partnering with South Carolina National Guard for Military Training</td>
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<td>• Supporting U.S. Nonproliferation Efforts</td>
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<td></td>
<td>• Proposed Use of SRS Facilities to Disposition German Research Reactor</td>
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<td>Pebble Bed Fuel</td>
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• We are making progress executing current EM and NNSA missions in light of budget reductions.

• We have identified new opportunities within global business segments of Environmental Stewardship, National Security, and Clean Energy

  - We have secured sponsorship / funding for some of the identified opportunities and are working to gain additional support
Acronyms

ARP  Actinide Removal Process
D&D  Deactivation & Decommissioning
DWPF Defense Waste Processing Facility
HEU  Highly Enriched Uranium
LLW  Low Level Waste
MCU  Modular Caustic Side Solvent Unit
MLLW Mixed Low level Waste
Pu   Plutonium
SWPF Salt Waste Processing Facility
TRU  Transuranic Waste
SNF  Spent Nuclear Fuel
WIPP Waste Isolation Pilot Plant