U.S. DEPARTMENT OF ENERGY | Savannah River Operations Office

South Carolina Nuclear Advisory Council

SRS Update and FY 2017 Budget

Service • Safety • Security • Stewardship • SRNL • Sustainability

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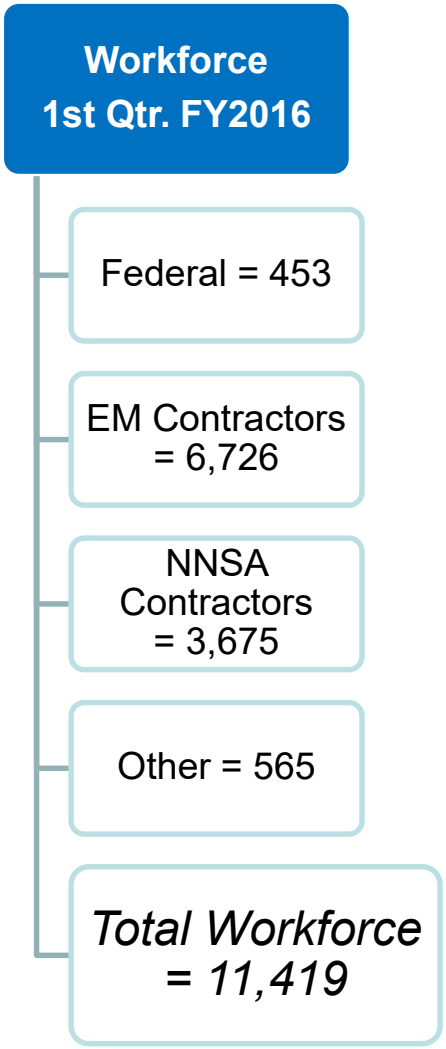
SRS Team: Partners in Progress



Federal Agencies

- DOE Savannah River Operations Office (DOE-SR)
- National Nuclear Security Administration (NNSA)
  - Savannah River Field Office
  - Office of Material Management & Minimization
  - Office of Acquisition and Project Management
- U.S. Forest Service (USFS)
- Office of Inspector General (OIG)

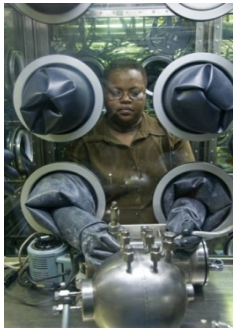
Contractors

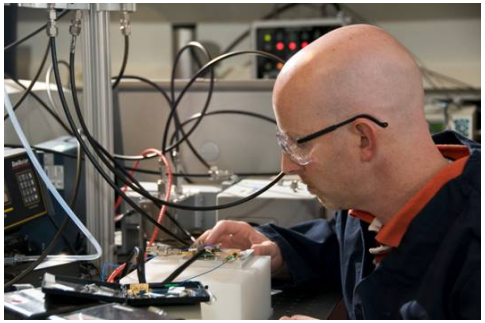
- Savannah River Nuclear Solutions (SRNS)
  - Management & Operations
  - Savannah River National Laboratory (SRNL)
- Savannah River Remediation (SRR)
  - Liquid Waste Operations
- Parsons (Salt Waste Processing Facility)
- Ameresco (Biomass Cogeneration Plant)
- Centerra-SRS (Security)
- Chicago Bridge & Iron (CB&I) AREVA
  - Mixed Oxide Fuel Fabrication Facility (MOX)
- University of Georgia
  - Savannah River Ecology Laboratory (SREL)
- Other: Support Service, Limited Service, Agency Partners, Grad Students, etc.

Sustaining Missions Vital to Our Nation and Neighbors

Continue leverage strategic investments to fulfill and grow missions of national importance:

- Lead **Environmental Management** priorities to safely and efficiently clean up the environmental legacy, reduce risk and protect our people, neighbors and environment
- Team with **National Nuclear Security Administration** to enable national defense capabilities (MOX, H Canyon, Tritium)
- Partner with **Office of Nuclear Energy** goals to provide clean, reliable energy sources, reduce greenhouse gases, and enhance national security
- Apply **Savannah River National Laboratory science and technology expertise** for business and mission growth





FY16 Highlights

- ✓ Operationally close Tank 12 and remove Bulk Waste in Tank 15 to meet FFA commitments
- ✓ Complete construction and initiate startup testing and commissioning of the Salt Waste Processing Facility (SWPF)
- ✓ Produce 150 canisters of vitrified high-level waste at Defense Waste Processing Facility (DWPF)
- ✓ Process up to 1.5 million gallons of salt waste through interim treatment systems (ARP/MCU)
- ✓ Continue liquid waste facility modifications to support the startup of SWPF
- ✓ Award commercial Salt Processing Demo Technology by early Summer 2016
- ✓ Complete Saltstone Disposal Unit (SDU) 6 Balance of Plant work
- ✓ Complete canister double stacking for 150 positions in Glass Waste Storage Building One
- ✓ Continue production of plutonium oxide suitable for disposition *(NNSA funded)*
- ✓ Initiate plutonium packaging operations for disposition at Waste Isolation Pilot Plant (WIPP)
- ✓ Continue spent nuclear fuel processing in H-Canyon and prepare for receipt of Canadian HEU
- ✓ Receive Foreign and Domestic Research Reactor spent nuclear fuel in L-Area
- ✓ Continue Building 235-F risk reduction per the implementation plan for DNFSB Recommendation 2012-1
- ✓ Continue safely storing Transuranic waste and disposition of Low Level and Mixed wastes
- ✓ Operate all required remediation systems, achieve all RCRA/CERCLA milestones and commitments, and continue field work to remediate D-Area Ash Basin
- ✓ Support Advanced Manufacturing Collaborative initiative for Savannah River National Laboratory

FY17 Budget Request Breakdown by DOE-EM Sites

Environmental Management by Site Amounts in (K)	FY 2015 Enacted	FY 2015 Current	FY 2016 Enacted	FY 2016 Request	FY 2017 $
Carlsbad/Waste isolation Pilot Plant (WIPP)	324,455	324,455	304,838	271,000	-33,838
Idaho	405,103	404,929	401,919	370,088	-31,831
Oak Ridge	431,142	431,142	468,407	391,407	-77,000
Mandatory	0	0	0	178,188	+178,188
Paducah	269,773	269,773	268,402	272,310	+3,908
Mandatory	0	0	0	207,916	207,916
Portsmouth	275,828	273,828	288,970	322,653	+33,683
Mandatory	0	0	0	257,645	+257,645
Richland/Hanford	1,007,230	1,007,230	990,653	800,000	-190,653
River Protection	1,212,000	1,212,000	1,414,000	1,499,965	+85,965
Savannah River	1,259,542	1,259,542	1,336,566	1,448,000	+111,434
Lawrence Berkeley National Laboratory	0	0	17,000	0	-17,000
Lawrence Livermore national Laboratory	1,366	1,366	1,366	1,396	+30
Nevada	64,851	64,851	62,385	62,176	-209
Sandia National Laboratory	2,801	2,801	2,500	4,130	+1,630
Separations Process Research Unit (SPRU)	0	0	0	3,685	+3,685
West Valley Demonstration Project	60,457	60,457	61,804	63,628	+1,824
Energy Technology Engineering Center	8,959	8,959	10,459	10,459	0
Los Alamos	189,600	189,600	185,000	189,000	+4,000
Moab	35,663	37,867	38,644	34,784	-3,860
Other Sites	13,297	13,297	14,389	9,389	-5,000
Headquarters Operations	38,979	38,517	69,238	74,979	+5,741
Mandatory	0	0	0	30,000	+30,000
Program Direction	280,784	280,784	281,951	290,050	+8,099
Uranium Enrichment Decontamination and Decommissioning Fund Contribution	463,000	463,000	0	155,100	+155,100
Subtotal, Environmental Management by Site	**6,344,830**	**6,344,398**	**6,218,491**	**6,274,199**	**+55,708**
Uranium Enrichment Decontamination and Decommissioning Fund Contribution Payment	-463,000	-463,000	0	-155,100	-155,100
Rescission of Prior year Balances	-20,813	-20,813	0	0	0
Total, Environmental Management	**5,861,017**	**5,860,585**	**6,218,491**	**6,119,099**	**-99,392**

SRS EM FY17 Budget Request Overview

Savannah River Site EM Budget ($Millions) *By Program Baseline Summary (PBS)*	FY 2015 Enacted	FY 2016 Enacted	FY 2017 President Request	DELTA FY16 vs FY17
PBS 11C Nuclear Materials	*260*	*255*		
PBS 12 Used Nuclear Fuel	*24*	*41*		
PBS 13 Solid Waste	48	52		
PBS 30 Soil & Groundwater Remediation	66	66		
SRS Risk Management Operations	398	414		
PBS 11C NM Stabilization & Disposition[1] (NEW)	*284*	*296*	311	15
Nuclear Material Management (NEW)			311	15
PBS 41 S&M, Risk Reduction & Deactivation[2] (NEW)	*0*	*0*	28	28
PBS 13 Solid Waste	*48*	*52*	51	(1)
PBS 30 Soil & Groundwater Remediation	*66*	*66*	74	8
Environmental Cleanup (NEW)			153	35
PBS 14C Radioactive Liquid Tank Waste	547	555	645	90
PBS 14C Saltstone Disposal Unit #6	30	35	7	(28)
PBS 14C Saltstone Disposal Unit #7	0	0	10	10
PBS 14C Salt Waste Processing Facility	135	194	160	(34)
Radioactive Liquid Tank Waste Stabilization and Disposition	712	784	822	38
PBS 202 General Plant Projects[3] (NEW)			17	17
PBS 100 Community & Regulatory Support	11	11	11	0
PBS 20 Safeguards & Security	138	128	134	6
SRS EM Programs Budget Authority	1,259	1,337	1,448	111

[1] PBS 11C and PBS 12 have been combined into one PBS (11C)
[2] New PBS 41 to include scope for 235-F deactivation and F-Canyon S&M
[3] New PBS 202 to include scope for infrastructure improvements and General Plant Projects

FY17 EM Request Supports Key SRS Missions

- ✓ Production of 100 —110 canisters of vitrified high-level waste at DWPF
- ✓ Processing up to 1.7 million gallons of salt waste through ARP/MCU
- ✓ Continued Startup testing and commissioning of SWPF
- ✓ Supports tank farm piping and equipment upgrades needed for the startup of SWPF (Dec. 2018)
- ✓ Supports SDU 6 readiness to receive waste and initiation of design activities for SDU 7
- ✓ Down-blending of EM-owned plutonium at K-Area for future disposal at WIPP
- ✓ Continued processing of spent nuclear fuel in H-Canyon, including completing preparations to process High Flux Isotope Reactor spent nuclear fuel
- ✓ Continued Receipt of Foreign and Domestic Research Reactor spent nuclear fuel in L-Area
- ✓ Continued activities per the implementation plan for DNFSB Recommendation 2012-1 to mitigate and remedy safety issues at Building 235-F
- ✓ Maintained Site security, including physical and computer security protection systems
- ✓ Continued community and regulatory support (e.g., Citizens Advisory Board, SCDHEC, SCDNR, and Payment in Lieu of Taxes to Aiken, Allendale, and Barnwell counties)
- ✓ Investments to address site-wide general purpose infrastructure needs

FY17 Request Supports SRS Infrastructure Improvements

New PBS 202, General Plant Projects	$K
1. SRNL – cell block window replacement (windows #7, 9 and 13)	$8,181
2. Repair site railroad infrastructure Phase 1 — supports H, K, L and E Areas	$2,557
3. 7th Level H-Canyon roof/over HB Line (H-Area)	$800
4. H Canyon air tunnel repair/replacement — tunnel repair preparation project	$2,009
5. 294-H sand filter roof upgrades for original facility	$1,000
6. 294-H sand filter roof upgrades of supplemental filter facility	$1,000
7. Tie-in connection and installation for HB-Line alternate diesel generator	$1,000
TOTAL	**$16,547**


SRNL Shielded Cells


H Canyon/HB-Line

Questions