



# SRS Setting the Success Standard for Our Nation

*Service • Stewardship • Safety • Security • SRNL • Sustainability*



## **Terrel J. (Terry) Spears**

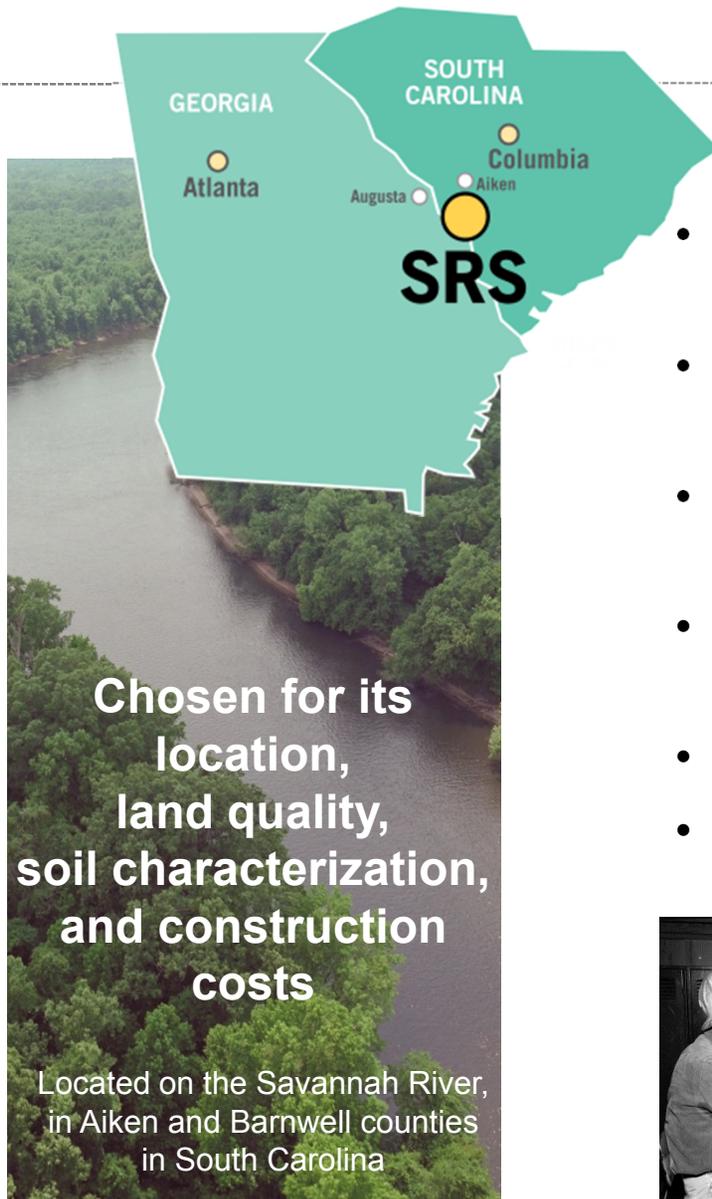
Deputy Manager  
U.S. Department of Energy  
Savannah River Operations Office

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## **Office of Environmental Management Robotics Team Visit**

December 7, 2015

# SRS History



- In 1949, President Truman announced that Russia tested its first atomic weapon
- In 1950, President Truman authorized construction of the Savannah River Plant (SRP)
- Atomic Energy Commission asked E.I. Du Pont de Nemours & Company to undertake the new atomic project
- Six towns were moved to make way for SRP, now the Savannah River Site
- Covering 198,344 acres or 310 square miles
- Over 38,000 workers at peak construction



# Serving our Nation Over Six Decades Strong



Happy  
65<sup>th</sup> SRS!  
November 2015

- ✓ Providing over 6 decades of knowledge, technology and solutions to tackle pressing national needs
- ✓ Pioneering development and deployment of nuclear technologies at scales never before imagined
- ✓ Standing as core of our Nation's nuclear deterrent, past to present
- ✓ Achieving significant cleanup and risk reduction milestones
- ✓ Protecting workers, public and environment continues as core objective
- ✓ Maintaining record as one of safest industrial complexes in world (top 5%)
- ✓ Continuing to serve as industry leader for safety in Savannah River National Laboratory operations  
*(Last 10 of 11 years by National Safety Council)*



U.S. DEPARTMENT OF  
**ENERGY**

# Early Production Years



## Early Years

- Five reactors
  - Two chemical separations plants
  - Heavy water extraction plant
  - Nuclear fuel and target fabrication facility
  - Waste management facilities
  - Laboratory/Analytical facilities
- Produced 36 metric tons of Plutonium (Pu) from 1953-1988

## Produce and recover nuclear materials

Tritium

Pu-238

Pu-239

Special  
Isotopes

Uranium  
Recovery

Cold War ending  
meant a completely  
different philosophy  
and approach to the  
nuclear arsenal.



# Today's Work for Neighbors and Nation

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## Environmental Management

Management, stabilization and disposition of nuclear materials

Management and disposition of solid, liquid and transuranic wastes

Spent fuel management

Excess facility demolition

Environmental remediation



## National Nuclear Security Administration

Tritium operations and extraction

Recovering Helium-3

Nonproliferation support

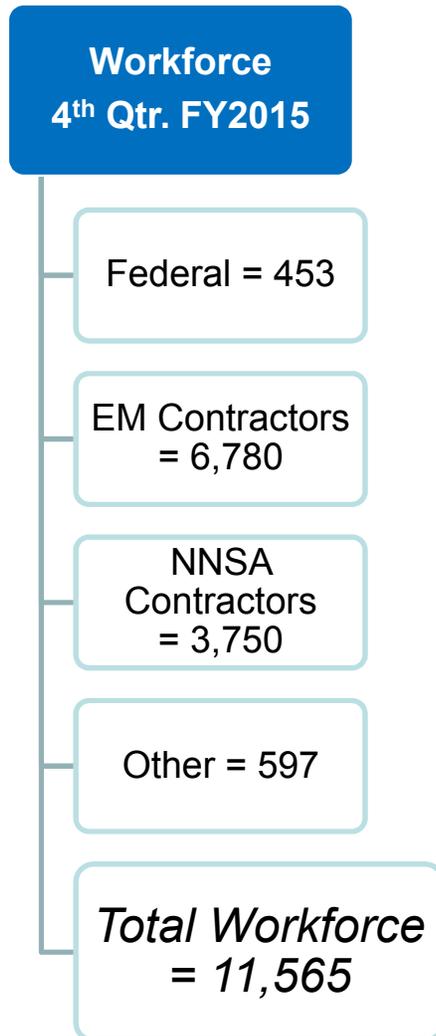
Mixed Oxide Fuel Fabrication Facility

Uranium blending and shipping

Foreign fuel receipts



# 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.



# Safety and Security Remain Top Priority

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# Stewardship: *Stepping Up Risk Reduction*



*Over 5* Mgal  
through ARP/MCU



*7 tanks closed*

Tank 12 next - May 2016



*Over 14* Mgal  
disposed at Saltstone

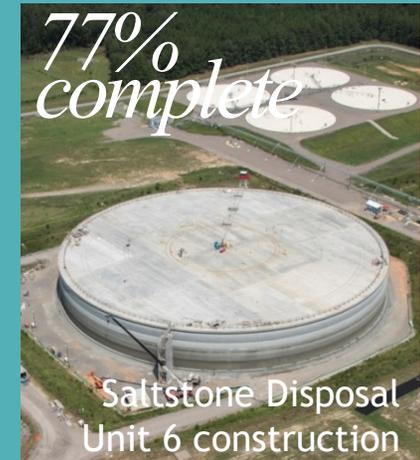


*91% complete*

Salt Waste Processing  
Facility construction



*3,970*  
DWPF canisters produced



*77% complete*

Saltstone Disposal  
Unit 6 construction



# Nuclear Materials Management: *Applying Best Assets*



*HB Line*

*H Canyon* Nation's only  
hardened chemical separations facility



**H Canyon  
turns 60  
May 2015**



# National Security and Nonproliferation: *Supporting National Defense Efforts*



*K Area*



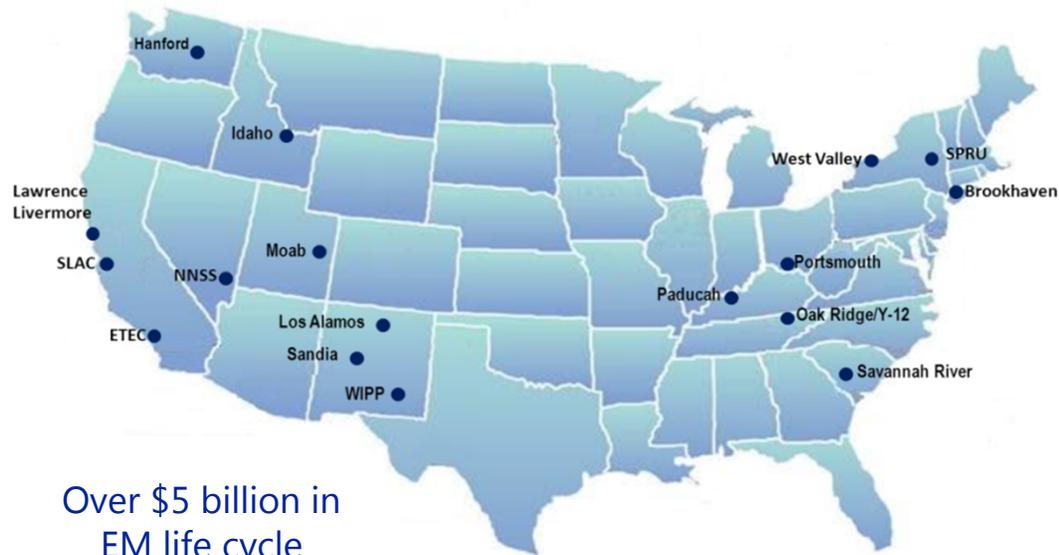
*L Basin*



*Tritium*



# SRNL: Critical to DOE Success with Worldwide Reputation



Over \$5 billion in EM life cycle savings



Strategic partner at other DOE sites



Fukushima support



Technical underpinning for SRS missions



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**ENERGY**

# SRS Core Missions Recap

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Continue leveraging strategic investments to successfully fulfill and grow missions of national importance

- Cleanup and risk reduction
- National security and nonproliferation
- Clean energy goals
- Applied science and technology (SRNL)



## Sustained Success for SRS: *Priorities • Progress • People*

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- Maintain safety/security culture
- Meet commitments
- Make critical infrastructure upgrades
- Continue execution of liquid waste and nuclear materials work scope and risk reduction progress
- Recruit and train next generation workforce (scientists, engineers, technicians, operators)
- Build on credible relations with stakeholders



*Delivering for our Nation* and our neighbors

