

SRS: A Changing Landscape

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SRNS: Our four mission areas supply solutions around the world

6,000 employees “Making the World Safer”



Environmental Stewardship

for soil, water and facilities



Supplying Tritium

for nuclear weapons deterrent



Securing Nuclear Materials

to prevent unwanted proliferation



Transforming Nuclear Materials

into assets and stable wasteforms



Savannah River National Laboratory

putting science to work



Support Services

Emergency Services • Water • Electrical • Cyber/IT • Roads
Construction • Maintenance

World-class
safety culture

Strong community
support

Resource Requirements Solved

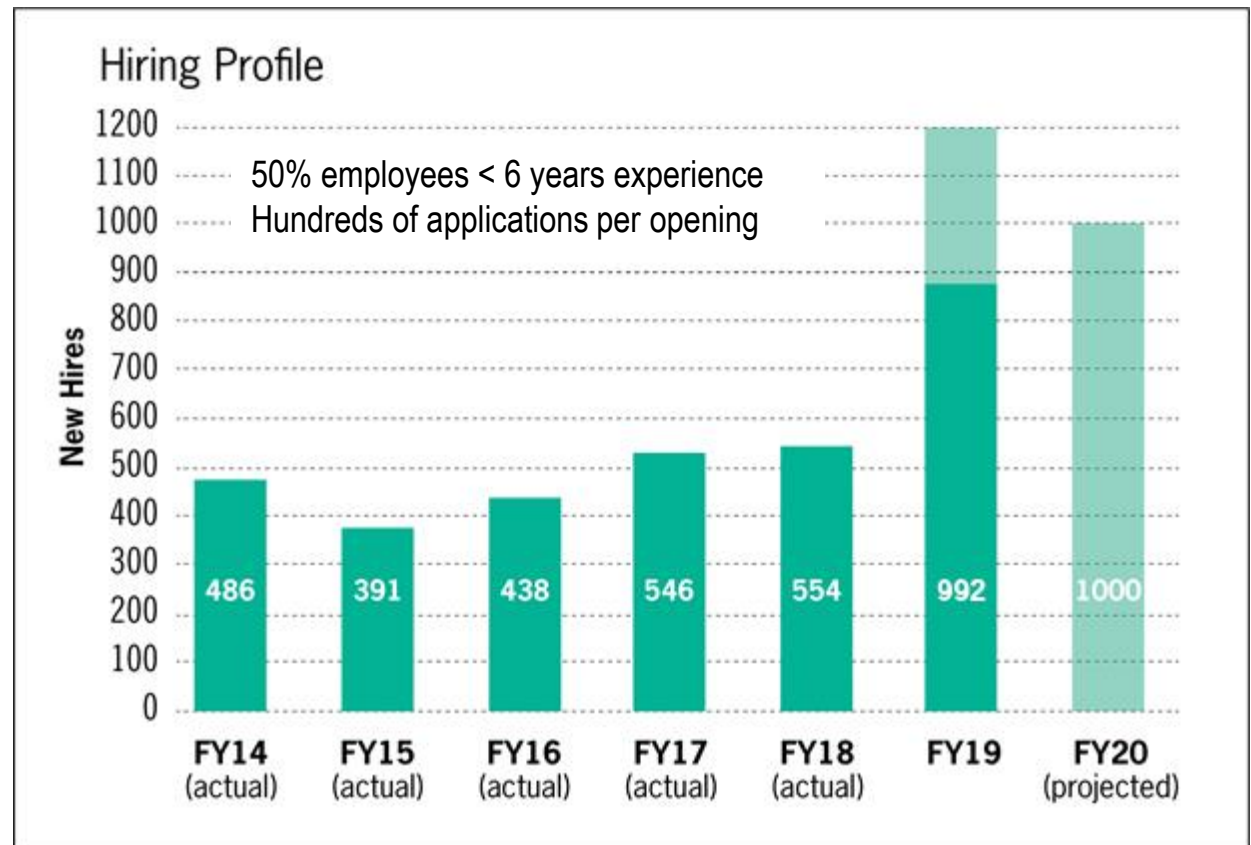
3,220
new full-service
employees

FY14-present

80%
hired from
local area

47
average age of
employees

down from
54 in 2008



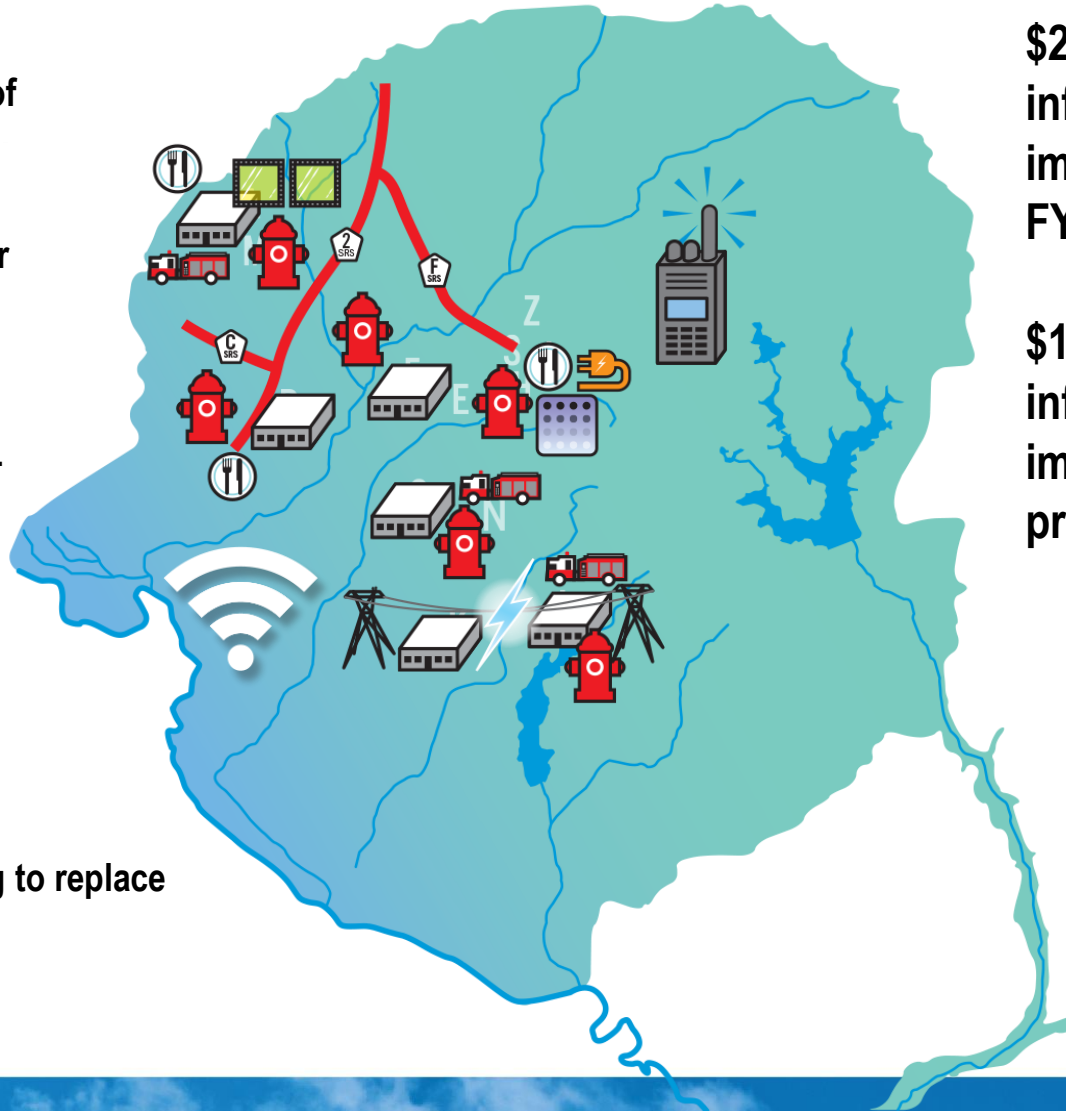
Streamlining the clearance process

- 151 clearances approved in 2QFY19; ~ 5 months for Q (Avg 70%)

Infrastructure Investment

Improving Reliability and Decreasing Reactive Maintenance

- Refurbished ~40 miles of paved roads
- Replaced 22 roofs
- Refurbished 29 firewater systems
- Replaced all emergency vehicles
- Replaced 13 of 16 SRNL shielded cell windows
- Replaced radio systems
- Replaced major power distribution systems
- Habitability upgrades
- Installed dissolver in H Canyon – preparing to replace electrolytic dissolver



\$241.3M spent on infrastructure improvements in FY16 - FY18

\$115M infrastructure improvements in progress in FY19

Recent Accomplishments

- Best safety record since contract inception
- Processing three uranium streams in H Canyon
- K Area posture change from surveillance to operations
- Accelerated down-blend and repackage scope
- 235-F risk reduction nearing completion
- Delivered acceleration layup strategy for HB Line
- 90-Acre D Ash Basin remediation completed 14 months ahead of schedule and \$9 million under budget
- 33 of 39 groundwater treatment systems converted from active to passive saving millions/yr
- SRNL on track to execute \$300M in FY19
- Modifications to consolidate analytical labs and closure of F Area facilities



...enables increased capability and missions

Our Missions

Environmental Management

Management, stabilization and disposition of nuclear materials

Management and disposition of solid, liquid and transuranic wastes

Spent fuel management

Environmental remediation and cleanup

FY18

EM

60%



FY19

EM

45%

(8% EM work paid by NNSA, Canada)

National Nuclear Security Administration

Tritium operations and extraction

Helium-3 recovery

Nonproliferation support

Uranium blending and shipping

Foreign fuel receipts

NNSA

35%



NNSA

50%

ADDS

MOX Transition

Pit Production Mission

Surplus Plutonium

Disposition Acceleration

Tritium Finishing Facility

Work for Others

Other federal agencies

Other DOE sites

Private industry

Other minor entities

WFO

5%



WFO

5%

Tritium Operations: Increased Production Period 2020-2024

- Tritium production, extraction and processing capabilities must increase to meet demand
- Requires 7 extractions per year by 2023
- Reservoir loading and testing complexity will increase; more complicated surveillance
- Work in progress in 3 key areas
 - Plant Preparation
 - \$74M Projects Execution Plan
 - Tritium Finishing Facility
 - Focused Hiring
 - 134 hired in FY18 and 62 in FY19
 - Total headcount - 668
 - Performance improvement
 - Maintenance and product quality
 - Improved efficiency and response capability

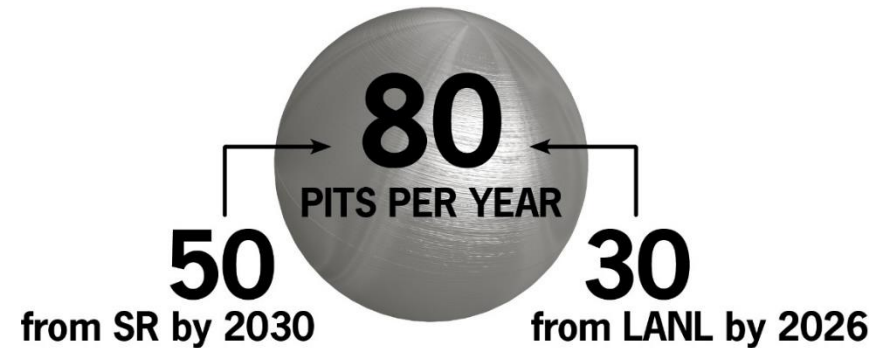


General John E Hyten, Commander of U.S. Strategic Command at SRTE



Pit production mission: Enduring capability

**Reliable delivery
of no fewer than 80 pits
per year**



**Lawrence Livermore National
Laboratory is Design Agency**



**Los Alamos National Laboratory
is the nation's Plutonium Center
of Excellence for R&D**

**Two facilities provide DoD more confidence
that production requirements can be met**

●
**Leverage NNSA investment
in MOX facility and resources**

●
**Maximize transfer of LANL
technical and process knowledge**

●
SRS brings production mindset



*The 2018 Nuclear Posture Review emphasizes the need for
“an effective, responsive, and resilient nuclear weapons infrastructure”
that can “adapt flexibly to shifting requirements”*

Repurposing the MOX Complex for Pu Pit Production

- 500,000-square-foot hardened production facility
- 11 support facilities on ~110 acres
- >200 Construction storage and support structures
- Site infrastructure includes electrical; domestic and fire protection water; sanitary/sewage systems in all occupied buildings
- 225,000 sq.ft. of office space available

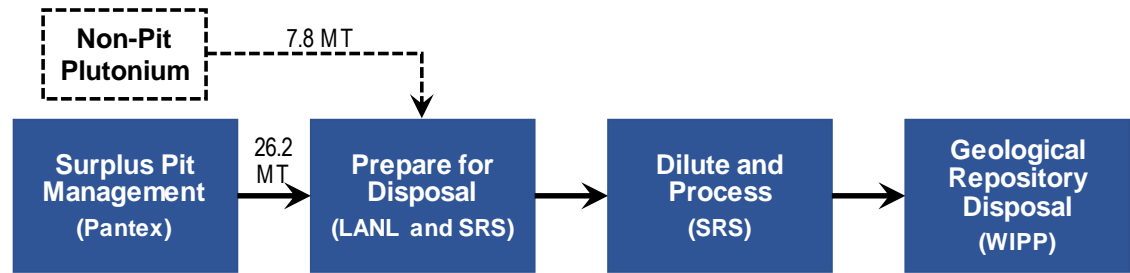
Savannah River has experience in repurposing on-site facilities and onboarding/training personnel for mission transition



Surplus Plutonium Disposition Program

- Transition from MOX Fuel approach to Dilute and Dispose approach
- Modifying glovebox to increase throughput
- Currently operating 2 shifts; will extend to 4 shifts by next year
- In design phase for a new \$500M 3-glovebox line in K Area
- Evaluating acceleration opportunities

Dilute and Dispose Approach to Surplus Pu Disposition



SRNS

Savannah River Nuclear Solutions
We make the world safer.

