

SRNS Update

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Governor's Nuclear Advisory Council

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SRNS: Supplying solutions around the world



Environmental Stewardship
for soil, water and facilities



Nuclear Materials for National Security
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



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

6,800
Employees
“Making the World Safer”

World-class safety culture
●
Strong community support

COVID-19 Site Integrated Response

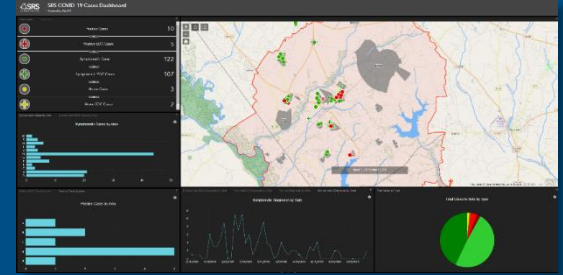
Infectious Disease Response Team War Room



Face Coverings



SRS Heat Map/Contact Tracing



Protocols Sheet

COVID-19 Updated Protocol

Employee Actions

Believe you have been exposed to COVID-19? <small>(confirmed, presumptive or close contact)</small>	NOT Showing Symptoms <ul style="list-style-type: none"> • Notify manager immediately • Contact the Site Medical COVID-19 Hotline (listed below) • Contact physician and monitor symptoms for 14 days • Communicate health status to manager and Site Medical
No known exposure	Showing Symptoms <ul style="list-style-type: none"> • Notify manager immediately (and go home if at work) • Contact the Site Medical COVID-19 Hotline (listed below) • Contact personal physician and follow physician's guidance • Communicate test results and health status to manager and Site Medical • An investigation will be done by management to determine areas and co-workers who will be instructed to self-isolate for COVID-19 symptoms • Steps will be put into place to clean impacted areas which will be biohazarded until cleaning is completed • Need physician release to provide to Site Medical to return to work

Communications

87° Clear
Heat Stress Cat. Two

Services
Communications
Applications
Reference
Web

ge for the Future

ars. SRNS MOX-Transition's task to clear all the loose const

assemble a big job, providing the support and assist

COVID-19 Site Integrated Response *(continued)*



5,217
employees screened
by medical

as of October 2, 2020

2,780
employees
tested

as of October 2, 2020

792
Facilities Cleaned

as of October 2, 2020

386
responses to
COVID-19 account

as of October 2, 2020



COVID-19 Site Integrated Response *(continued)*



5,500
capability for
Citrix & VPN

6,100
SRS employees
telework ready



20K
face covers
produced/procured

>750
face shields
produced/procured



>100
temperature
monitoring stations

>600
thermometers/scanners
distributed

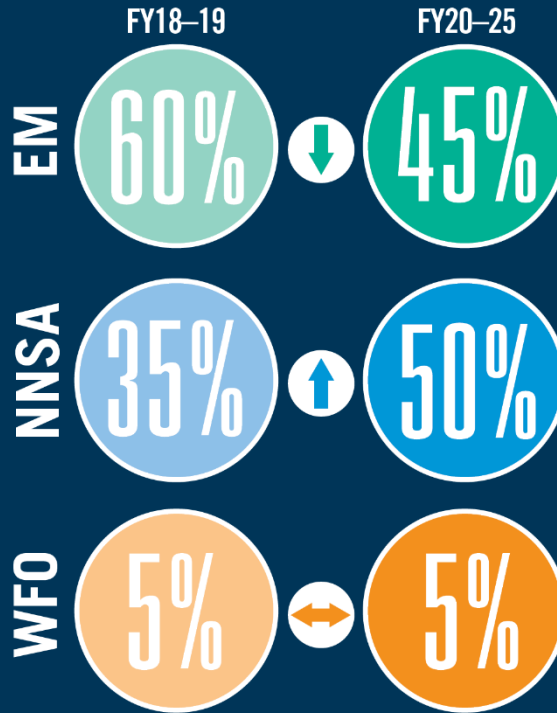
Tornado Response



April 13, 2020

Changing SRNS Customer Landscape

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

National Nuclear Security Administration

Tritium operations and extraction
Helium-3 recovery
Nonproliferation support
Uranium blending and shipping
Foreign fuel receipts

Work for Others

Other federal agencies
Other DOE sites
Private industry
Other minor entities

+ ADDS

MOX Termination
Proposed Pit Production Mission
Surplus Plutonium Disposition Acceleration
Tritium Finishing Facility

Delivering on EM Commitments

Remediation and D&D

- Passive groundwater remediation
 - P Barrier Wall – injected 760 tons of iron
 - G Area Oil Seepage Basin remediation completed one year early
 - Transitioned M-Area groundwater solvent removal from steam injection to solar powered MicroBlowers (saves \$200K/year)
- D&D of four buildings this year
- Ford Building D&D underway; D Area Powerhouse upcoming



235-F Plutonium Facility

- Viewed by DNFSB as one of top 10 most dangerous buildings in the United States
- High hazard deactivation
- Performed D&D and met requirements to close DNFSB Recommendation 2012-1
- Goal to achieve “Cold and Dark” by 2022



H Canyon

- Recent and Current Campaigns
 - Target Residue Material
 - Material Test Reactor Fuel
 - High Flux Isotope Reactor Cores
 - Sodium Reactor Experiment discard to Sludge Batch 9
- Changed processing techniques
 - Layup portion of the canyon
 - Potential for significant life cycle costs savings
 - Meets non-proliferation objectives



NNSA Scope Expansion and Capital Projects

Tritium Operations

- 85% growth in three years
- Tritium extraction and processing capabilities must increase to meet demand
 - Complete 3X at 6/year rate
 - Requires 6 extractions per year by 2023
 - Reservoir loading and testing complexity will increase; more complicated surveillance
- Tritium Finishing Facility (TFF)
CD-1 approved
 - Project Team formed and moving out



Surplus Pu Program

- Repackaged and shipped one metric ton of plutonium from South Carolina to meet a court order by January 2020.
- Transition from MOX Fuel approach to Dilute and Dispose approach
- Outage for optimization of existing glovebox complete
- CD-1 approved and construction started on project to expand downblending capability
- 12/7 operations in KIS glovebox; preparing to move to round the clock by July 2021



Proposed SRPPF

- Deliver 80 pits per year
 - 50 during 2030 - SRS
 - 30 during 2026 - LANL
- Conceptual Design Report and CD-1 package by 12/31/2020
- Implementing knowledge transfer with LANL to share best practices
- Former MOX property being repurposed for UPF, PPF, SPD and other NNSA missions
- Established Pu Modernization Program Office



SRPPF – *A project like no other*

Meeting the National Need

In 20 Months

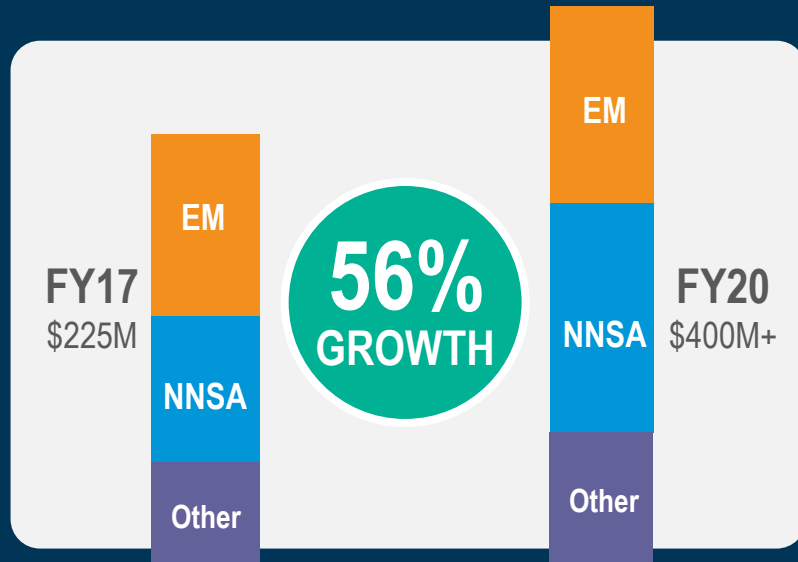
- Organized and staffed to more than 560 Full Time Employees in 5 locations in 18
- Strong collaboration between SRS, LANL, LLNL, NNSA, and subcontractors
- Three field tests commencing this Fall
- Technology readiness assessments completed
- SRS personnel assigned to LANL for knowledge transfer
- Conceptual Design > 30%
- 13,500 conceptual design documents prepared (Design Reviews this fall)
- Completed \$174M in scope during FY20 – poised to complete \$400M in FY21
(D&R, Site Prep, TDA field work begins, Final Design)



Savannah River National Laboratory: *Continued Growth*

\$400M

FY20 Programmatic Lab Budget



Future Growth Areas

- Cybersecurity
- Test Range and System Evaluation
- Modeling and Computing

Overall anticipated growth for 2021 >10%

Collaborations

SRNL College/University Faculty Members

- 24 Adjunct Professors in 11 Schools
- 10 Advisory Board Members in 7 schools

Growth of Postgrads

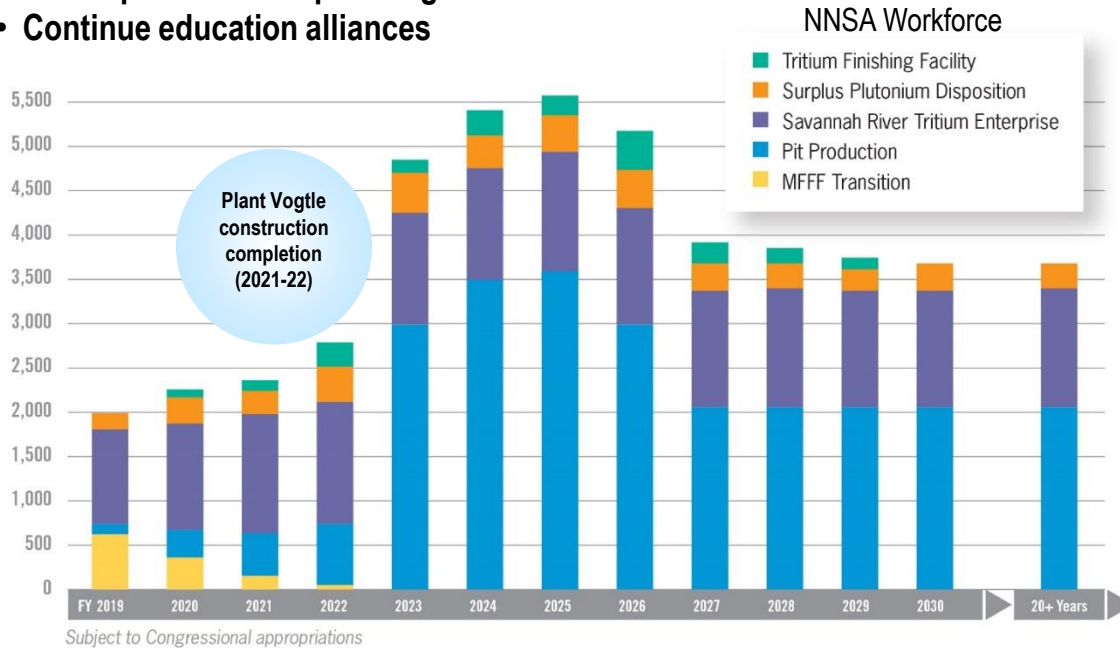
In the past 12 months, 21.7 percent of SRNL new hires have Graduate Level Degrees or higher

University Relationships

Relationships with 24 Universities including MOUs with 12

Overarching Strategy: Workforce Development

- Recruit and retain critical workforce
- Leverage Workforce Opportunities in Regional Careers Programs
- Develop succession planning
- Continue education alliances



SRNS and MOU Partners in Education

- Aiken Technical College
- Allen University
- Augusta Technical College
- Augusta University
- Benedict College
- Claffin University
- Clemson University
- University of South Carolina-Columbia
- University of South Carolina-Aiken
- USC Aiken VET Center
- South Carolina State University
- Denmark Technical College
- Florida International University
- Fort Gordon Veterans Program
- UT-Batelle
- Voorhees College

6,800
employees

46
average age of employees

down from 54 in 2008

FY20 Infrastructure Accomplishments



Roofs / Habitability

- 704-C, 706-N, 722-A habitability improvements
- 766-H, 736-A, 722-A roof replacements
- B Area cubicle replacement projects



Roads / Grounds / Rolling Stock

- New pumper truck
- J Area Domestic Water final tie-in for SWPF
- Road C Phase 7 traffic signal improvements
- Road F Guardrail repairs



Site Communication / IT

- A Area Radio Trunking Expansion
- Replaced over 800 aging network devices, enhanced cyber security posture
- Upgrades to improved cellular signals in B Area
- Enabled the Spider Node for additional cellular phone connections and significantly faster data transfer speeds.
- Provided access for an additional 2,000 teleworkers
- Increased from a 2G to a 10G circuit from SRS to ESN Net Atlanta



FY20 Infrastructure Accomplishments *(continued)*



Laboratory Consolidation

- Completed Lab B-118 modifications; the first of seven labs to be modified by the project
- B-107 Laboratory Radiohood/bench equipment installation
- B-115 Laboratory - Glovebox and Off-Gas Exhaust ductwork testing is in progress
- 48 of 58 analytical methods successfully qualified and moved to A Area
- Layup of 7 of 8 772-F/772-1F individual laboratories to support the future closure of F/H Lab



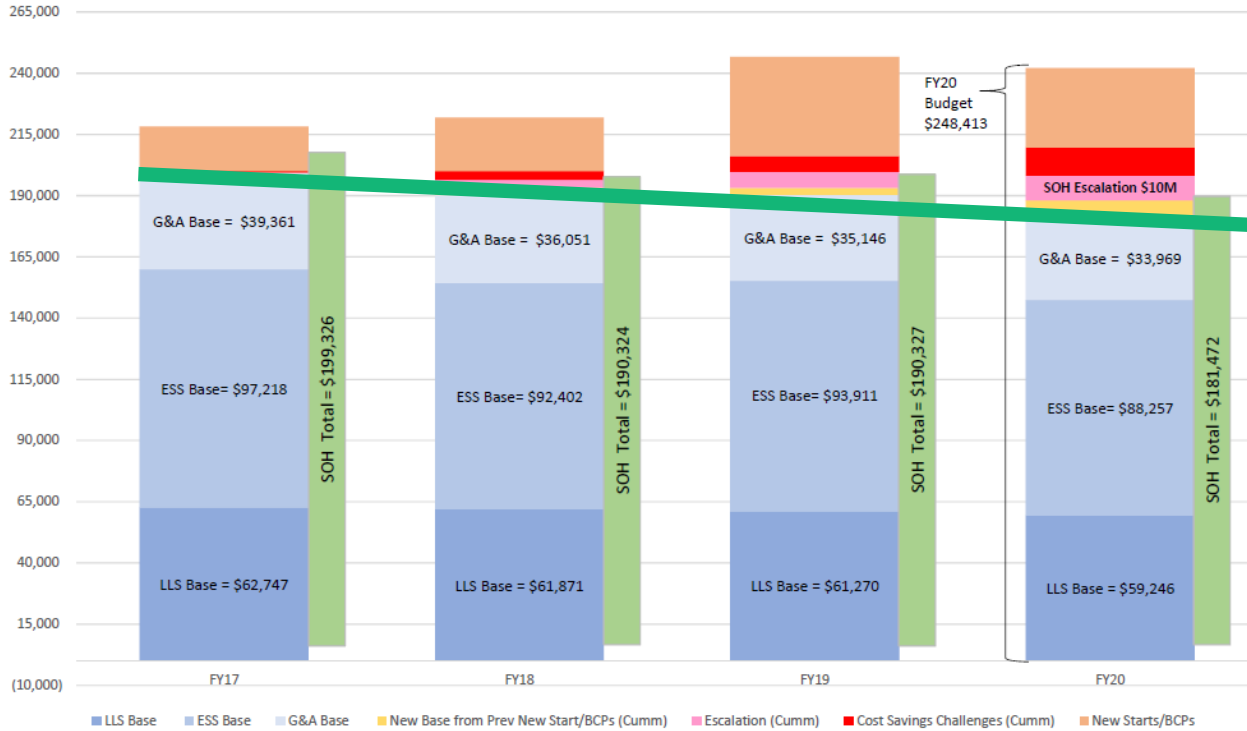
SRNL

- SRNL 773-A Conference Rooms and building lobby improvements
- Implemented DSA/TSR Rev 19/21 resolving many fire water supply and suppression system issues.
- Glass Shop Relocation modifications in 735-A
- Field work on the replacement of the 773-A, D-Wing South roof resumed



Site Overheads

in \$K



8%
reduction

in overhead cost

Driving base costs down
with savings

Increased infrastructure
investment