

INNOVATION • DEFENSE
NONPROLIFERATION • ENVIRONMENT



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We make the world safer.

SRNS Spring 2023 Update

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Governor's Nuclear Advisory Council April 2023

6,000 Employees *“Making the world safer.”*



Savannah River Site Aiken, S.C.

310 square-mile site
11,500 employees

\$2.7 billion

SRNS Budget

MISSION AREAS



Environmental Stewardship
for soil, water and facilities



Nuclear Materials for National Security
for nuclear weapons deterrent



Securing Nuclear Materials
to prevent unwanted proliferation



Transforming Nuclear Materials
into assets and stable wasteforms



M&O Support Services

SRNS Missions

EM



NNSA



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
- Nonproliferation support
- Foreign fuel receipts
- Surplus Pu Disposition
- Pu Modernization
- SRPPF Project
- Tritium Finishing Facility

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Overview and Agenda

- **Great overall performance and execution**
- **Strong overall budget support**
- **EM-NNSA transition planning and decision making well underway**
- **4+1 year contract extension**

Topics

**Environmental
Management**

**Savannah
River
Plutonium
Processing
Facility**

**Surplus
Plutonium
Disposition**

Delivering on EM Commitments

- ✔ Completed first transfer of uranium solution from **Accelerated Basin De-inventory** mission to liquid waste.
- ✔ Continued preparation for the **Fast Critical Assembly** spent fuel dissolution campaign in H Canyon; electrolytic dissolver installation complete. Early CY24 dissolutions.
- ✔ **235-F** Deactivated and moving to decommissioning.
- ✔ Shipped final TRUPACT-III; last of 239 SLB2 shipments to WIPP; 15 total shipments in FY22.
- ✔ Construction mobilized in accordance with agreement reached with federal environmental regulators on **final cleanup of Lower Three Runs** stream.
- ✔ Charging stations installed and **EV** transition in progress.
- ✔ Developing multiple large scale **solar installations** with Dominion Energy SC.



U.S. DEPARTMENT OF
ENERGY



Savannah River Plutonium Processing Facility Overview



- **Repurposing a seismically-qualified structure**
 - 400,000 square feet of Hazard Category-2 space
 - Interior walls of reinforced concrete for personnel shielding and durability for 50-year facility design life
- **Supporting facilities, including office, assembly, and fabrication space**
- **Existing SRS services and infrastructure**
- **SRS world-class safety and security culture**
- **SRS experience, including**
 - Plutonium processing
 - Meeting Department of Defense schedules and requirements
 - 24/7 operations
- **SRNS' experienced project and operations team and disciplined Conduct of Operations**

SRS Pit Production Strategic Plan



- Conceptual Design
- CD-1 Approval: Package lauded as best the team had ever reviewed



- Design, CD-2/3
- Design, CD-3a Construction
- Design, Unclassified training - TOC
- Construction, Classified training - HFTOC
- Construction, In-plant training
- Early procurement and site preparation

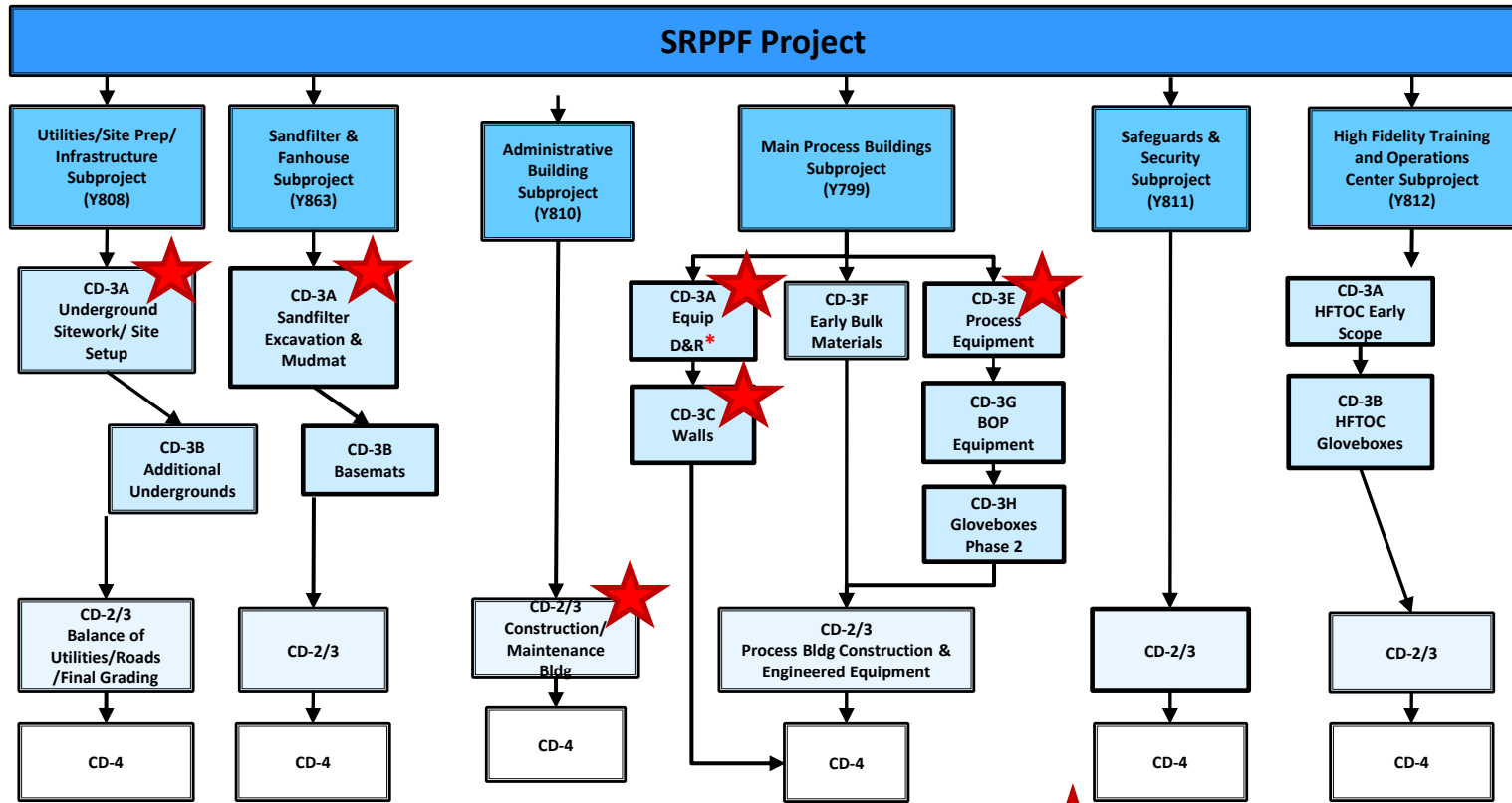


- Training, System Checkout, Startup, Operational Readiness Review
- Equipment qualification
- Operator certification
- First Production Unit
- At least 50 pits per year

Progress Toward SRPPF

- 1250 people working project
- Design completion range 40-90%
- Executing a robust \$1.2B FY23 spend plan and workforce strategy to accelerate the project

Early Long Lead Procurements and Site Prep Advancing Project

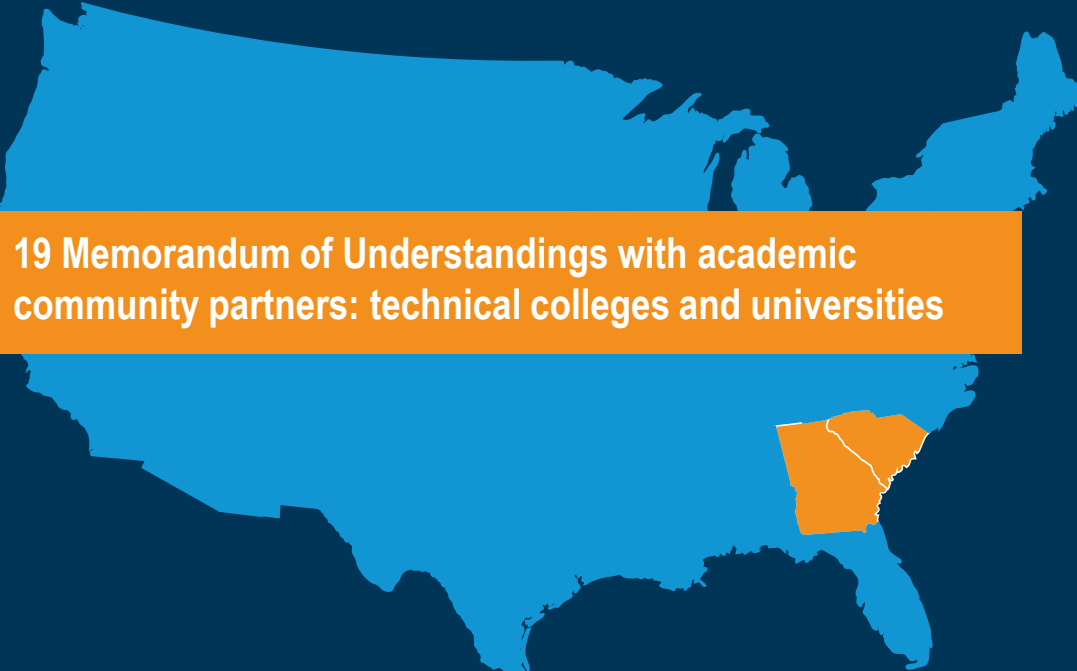


= FY23 Focus

*In progress, 10% complete

SRPPF Program Staffing

- Prioritizing the existing workforce locally
- Collaborating with the private sector on innovative programs to model supply resources and demand for selected critical positions
- Utilizing traditional SRNS workforce supply chain
- Several unique skill sets:
 - Metrology, high precision machining, cyber security, etc.
 - Machinists with nuclear skills



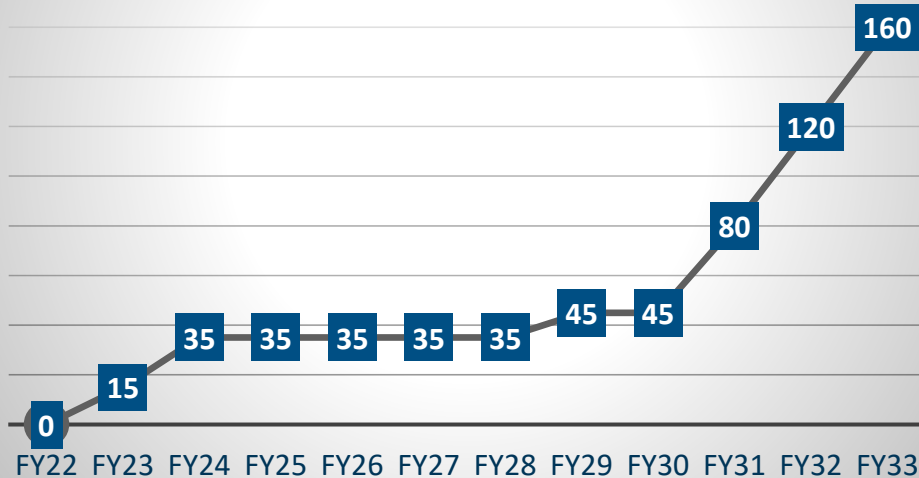
19 Memorandum of Understandings with academic community partners: technical colleges and universities

Surplus Pu Disposition Project Overview



Dilute and Dispose Mission Progress

SRS Projected Pu Shipments to WIPP



- Key Milestones to date:
- ✓ **6/16/2020** KIS glovebox modified to improve efficiency of operations and reduce radiological dose
 - ✓ **6/2/2021** First CCO drum of diluted Pu oxide delivered to the new characterization and storage pad
 - ✓ **12/15/2022** First shipment of diluted surplus Pu oxide leaves SRS for WIPP
 - ✓ **4/12/2023** Three additional shipments successfully completed

Surplus Pu Disposition Project Update

Expand SRS downblending capability

- Three new gloveboxes
- Support systems including security and safety systems, electrical, piping, active confinement ventilation, fire protection systems, etc.
- HEPA/Electrical Building and ventilation stacks

Dilute and Dispose Operations

- Blend Pu oxide with adulterant
- Store and characterize
- Package and ship to WIPP in New Mexico for disposal



SPD Capital Project Timeline

FY20 – FY21

- ✓ SPD CD-1 approved
- ✓ CD-3A Phase 1 (early site preparation) approved
- ✓ CD-3A Phase 2 (long lead procurements) approved
- ✓ Early Site Prep (CD-3A Phase 1) complete

FY22

- ✓ CD-3A Phase 3 (Additional Early Site Prep) approved and construction started
- ✓ HEPA filter housing received

FY23

- ✓ Final design complete
- First glovebox received
- CD-3A Phase 3 continues (27% complete)

FY24

- Two remaining gloveboxes and diesel generator received
- CD-3A Phase 3 complete
- Glovebox installation and construction begins

FY28 – FY31

- SPD project complete
- Dilute operations transition

SRNS 5-Year Hiring Projection

Note: Virtually all projected growth to support Pit Production Mission

Employee Type	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	Total 5 Year Hiring (including attrition)
Craft	457	522	1074	125	284	2462
Exempt	608	604	538	566	552	2868
LSE	225	225	225	225	225	1125
Nonexempt	181	130	111	119	117	658
SOP	162	98	85	91	88	524
Other (SA/Subs/CWR)	318	138	174	60	93	783
Projected Total Hiring	1950	1717	2207	1186	1359	8419
Projected Attrition	(877)	(888)	(890)	(881)	(865)	(4401)
Anticipated Growth	1073	829	1317	305	494	4018

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