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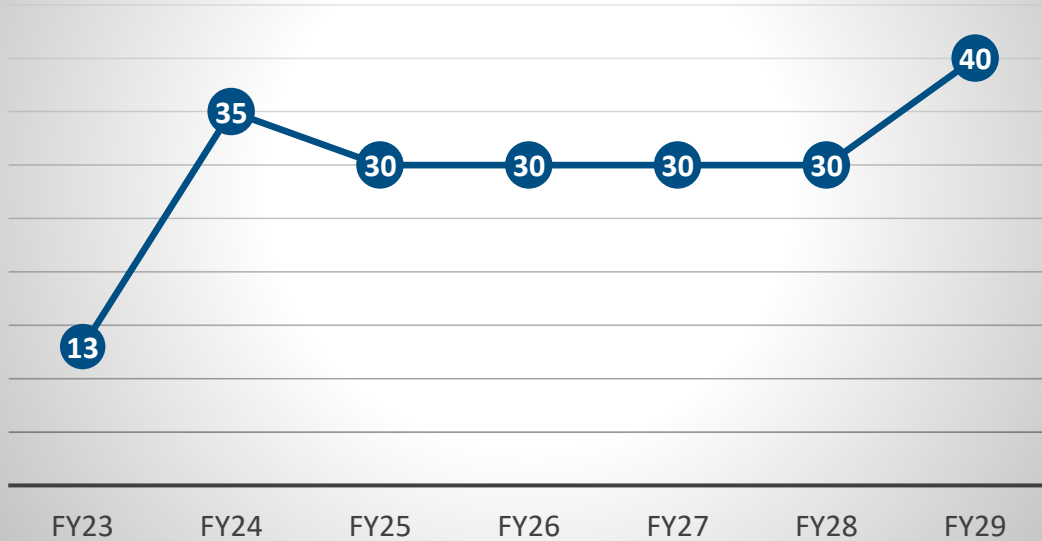
# SRNS Fall 2024 Update

**Dennis Carr**

President and CEO, Savannah River Nuclear Solutions

*Governor's Nuclear Advisory Council Meeting, October 2024*

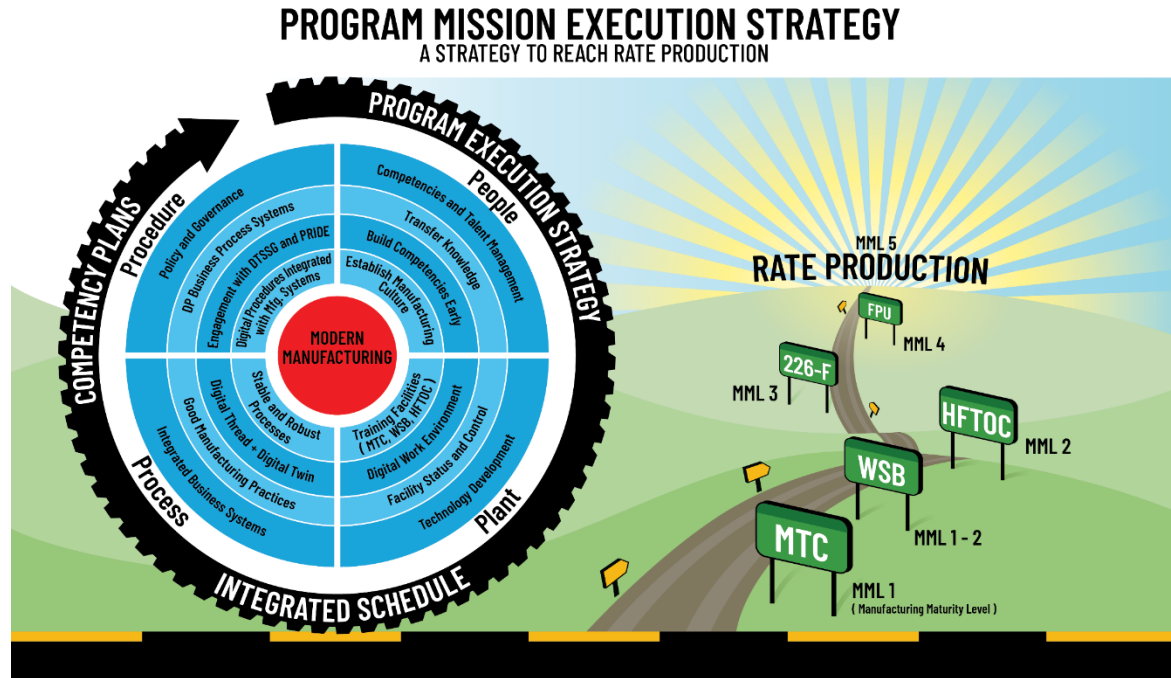
## Actual/Projected Shipments to WIPP



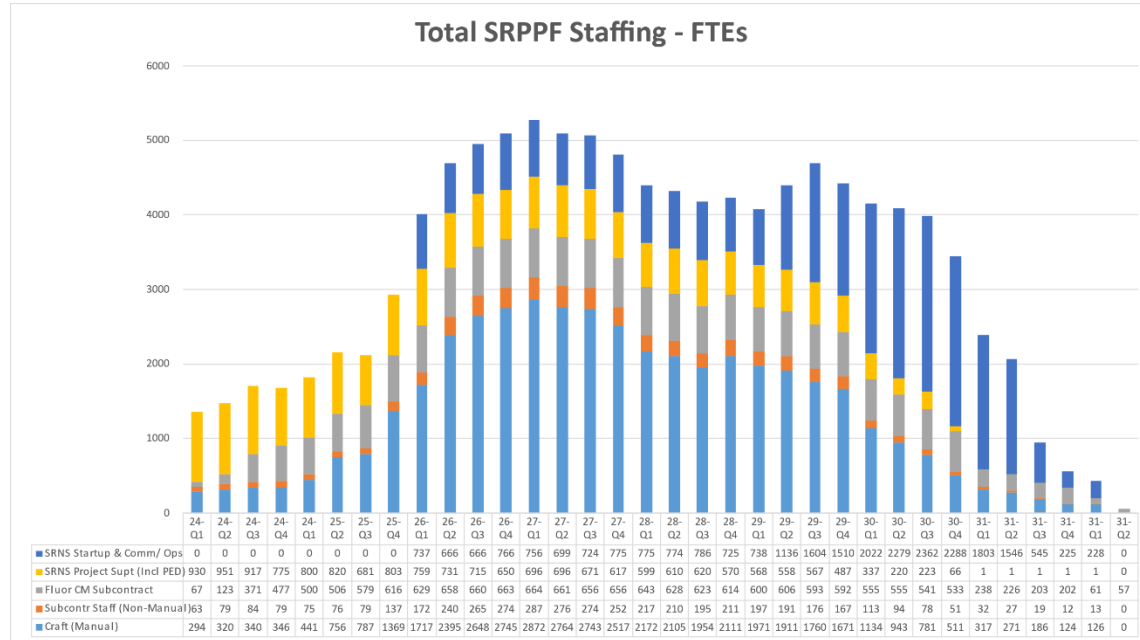
### Important Milestones:

- 1<sup>st</sup> completed Surplus Plutonium Metric Ton downblended expected CY24
- Surplus Plutonium Disposition Project CD 2/3 (Construction Start) planned CY24

- Pit Production Operations and Programs at SRS recently achieved a significant milestone with the ribbon cutting for the Machining Training Center (MTC).
- Developed to provide a means of building competency in operation and maintenance of high precision machining equipment.
- Once proficiency is established, employees will transfer to other areas of the Site for further job specific training.



- Sharp increase in craft labor to support SRPPF Construction over the next 24 months.
- Requires significant increase in temporary housing availability in areas surrounding SRS.
- SRNS coordinating with city and county governments, trade associations, and others to facilitate needed capacity.



# Operational Updates - Tritium Operations



- Completed five extractions for FY24 and met all shipments to the Department of Defense.
- Projecting 8 tritium extractions per year by FY26
- Completed all Gas Transfer System Surveillance Testing requirements to support certification of the stockpile.
- Preparing for a major equipment recapitalization effort (e.g. the CY25 Outage) that will allow for new technology implementation and equipment replacement.
- *Upgrading Thermal Cycling Absorption Process (TCAP) and Cryogenic Valves in H Area New Manufacturing*
- Updating the Safety Basis to allow for greater confidence in worker and public protection and to assist in meeting DNFSB recommendations.
  - Combined the Tritium Facilities and TEF Safety Basis into one cohesive Combined Tritium Facilities plan
  - Included additional Engineered features and Specific Administrative Controls
  - Provided allowances for the CY25 Outage
- Completed Site Preparations and warehouse construction for a new Tritium Finishing Facility to replace the 70+ year old H Area Old Manufacturing.
- Minor Projects – Met Project Closeout on eight Minor Projects in FY24, Project Complete on five others, and Beneficial Occupancy for another.



Savannah River Tritium Enterprise



## Fast Critical Assembly Mission

- Completed the Fast Critical Assembly (FCA) facility improvement project scope by completing performance testing of newly installed equipment and successfully completing multiple contractor and federal readiness reviews. We initiated hot operations by completing four batches (out of approximately 18 for the campaign).
- Fabricated and implemented a new probe which allows faster verification of dissolution completion rather than waiting on sample results (24-36 hours saved per charge).

## Non-Aluminum Spent Nuclear Fuel Disposition

- EMO made considerable progress in non-aluminum spent nuclear fuel (NASNF) disposition, with intentions to utilize the 6.3D dissolver following the FCA Campaign. The NASNF Campaign #1 (68 of ~400 bundles NASNF) flowsheet was approved, development of sludge disposition matured towards implementation, and new bundle prototypes, underwater tooling, tables, and a bandsaw needed to support NASNF future campaigns were procured. Campaign expected to be complete CY2034.

## High Assay Low Enriched Uranium Mission

- H Canyon consolidated its highly enriched uranium material in A Line and developed the training platform in preparation for future HALEU mission.



## Scope

### Full-Scale Exercise (June 06, 2024)

- SRS employees proactively prepared for a radiological release and contamination emergency during the annual Site emergency exercise, involving nearly 250 personnel.
- Site Emergency Response Organization received high marks throughout the graded exercise.

## Impacted Areas

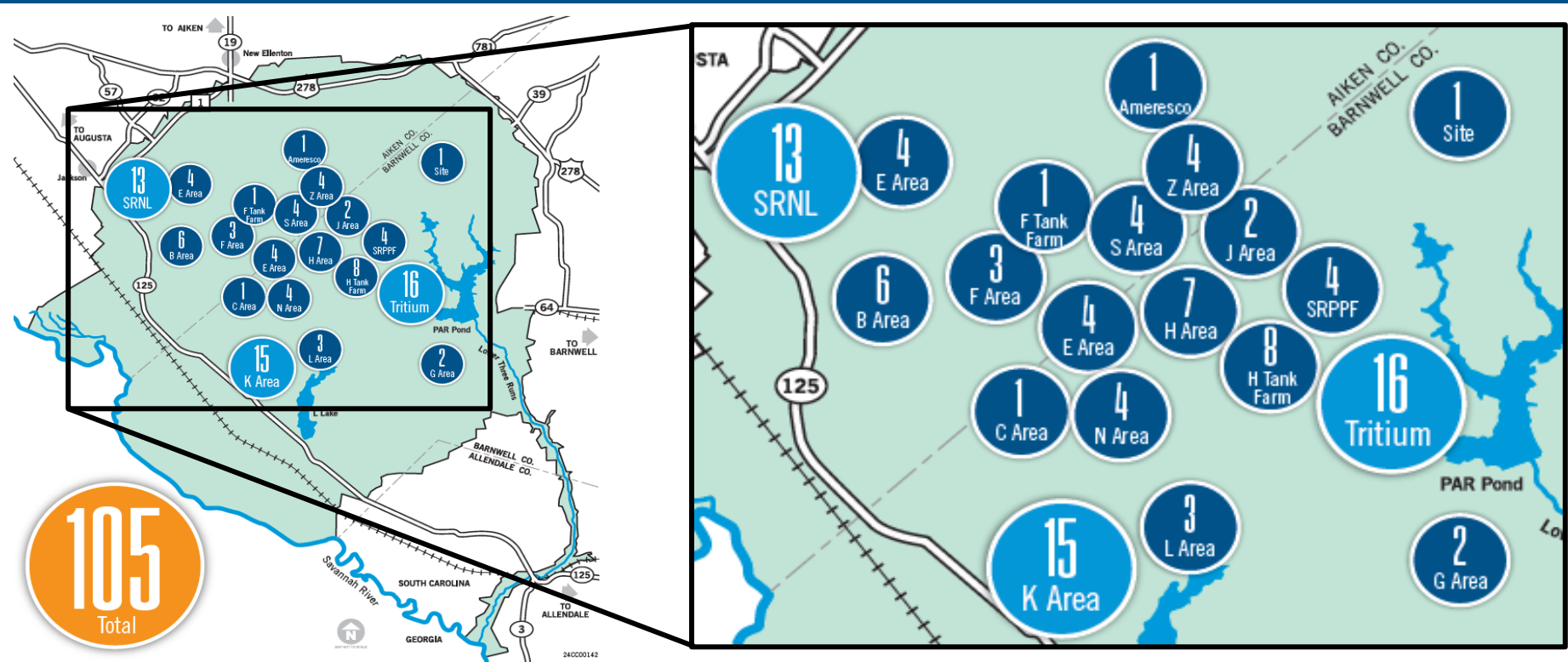
### K-Area

- A mock thunderstorm microburst was responsible for a simulated delivery truck crash into K Area's Criticality Control Overpack (CCO) pad.
- Simulated incident resulted in several mock injuries, one mock fatality, and protective actions issued for the area.

## Participants

- |                                       |   |                               |
|---------------------------------------|---|-------------------------------|
| – K-Area                              | – Savannah River Site Operations Center | – <b>Offsite Participants</b> |
| – H-Area RPD                          | – Site Emergency Response Organization  | – DOE-HQ Watch Office         |
| – L-Area RPD                          | – Joint Information Center              | – Barnwell County Coroner     |
| – Savannah River Site Fire Department | – Site Medical                          | – Doctor's Hospitals          |
| – Centerra                            | – Argonne National Lab PAST Academy*    | – Wellstar MCG                |

# SRS Fire Department - Drills by Area





# Hurricane Helene Site Recovery



- Hurricane Helene's destructive path knocked down trees and powerlines throughout the Savannah River Site. Every roadway at SRS was impacted, the majority of which was addressed in two days through the heroic efforts of the SRS Site Services, the Fire Department, Centerra, and the Forestry Service.
- SRS was in an operational emergency status for several days as the Emergency Response Organization worked with all Site tenants to recover from water intrusion and process interruptions with no significant impact.
- Weather and Safety Leave was made available to all full-time employees unable to work while essential personnel remained on duty for long hours to mitigate the storm impacts prior to shift relief.
- SRNS subcontractor, Russell's Pizza provided nearly 8,000 lunches to essential workers for the entire week.
- SRNS worked with the DOE-SR and NNSA to provide excess MREs (approximately 15,000) to surrounding communities and donations were provided to both the SC and Georgia Red Cross.
- SRNS implemented a controlled resumption of normal operations through a phased return to work.

Impact			
7,466 meals provided to essential workers	Thousands of trees and powerlines cleared	≥30 power poles restored	15,000+ MREs provided to surrounding area
≥3 miles of power line repaired	2,500+ sandbags filled for storm preparation	≥60 gate barrier arms replaced	\$50K donated to SC and Georgia Red Cross

Over 2,500 sandbags were filled in preparation for Hurricane Helene.

Over 30 power poles were replaced during recovery efforts.

Thousands of trees and powerlines were cleared from SRS roadways.

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