



U.S. DEPARTMENT OF  
**ENERGY**



# 235-F and DNFSB Recommendations

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# SRS Building 235-F



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# Purpose

- Provide information regarding ongoing risk reduction activities in the 235-F Facility
- Provide overview of Defense Nuclear Facility Safety Board (DNFSB) recommendation



Building 235-F

Plutonium Fuel Form (PuFF) Facility



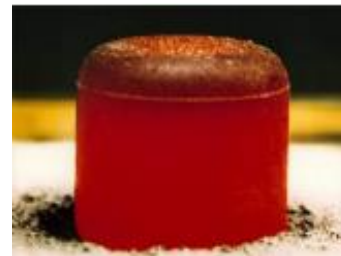
# Agenda

- History of Building 235-F
- Challenges
- Current Plans
- Q & A



# Facility History

- Building 235-F constructed in the 1950's as part of original Savannah River Plant
- PuFF mission was performed 1979 through 1984
- Historical Missions:
  - Special products for Savannah River Site Reactors
  - Special mission heat source fabrication for NASA's missions
  - Plutonium material storage
- Three primary Pu-238 process areas
  - Old Metallurgical Lab
  - Plutonium Experimental Facility
  - Plutonium Fuel Form Cells
- Facility placed in standby mode in 1984



Heat Source



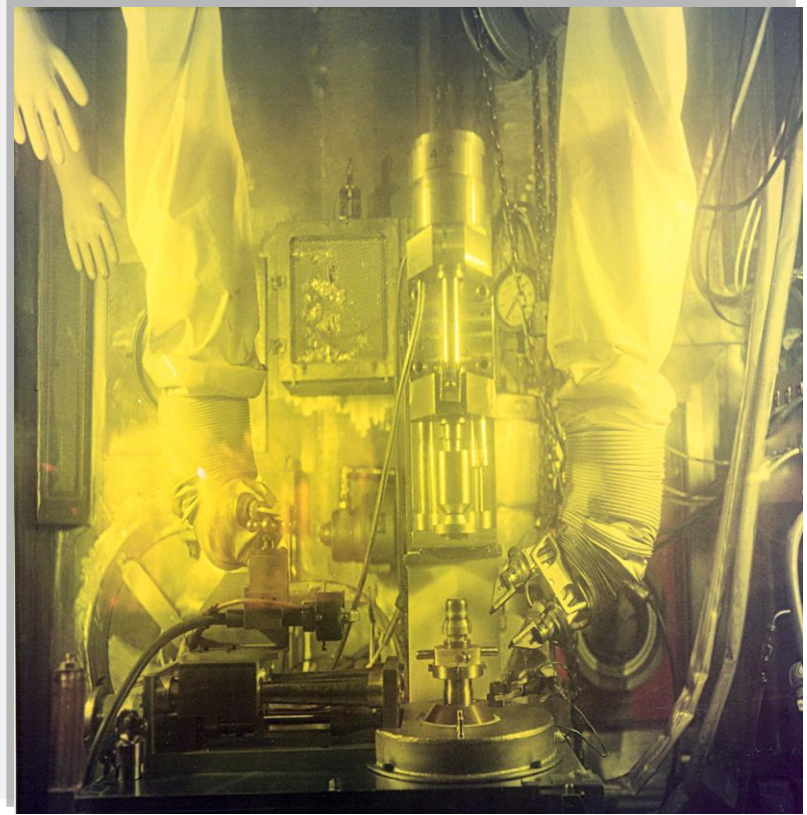
Space Mission

# Plutonium Fuel Form (PuFF) Facility History



Early Construction of 235-F

Interior of a glovebox



# Plutonium Fuel Form (PuFF) Facility History



Process Cell

Process Cell



# Challenges

- Large amount of residual material.
- Under accident condition (Seismically Initiated Full Facility Fire) an onsite/collocated worker receive greater than  $> 500$  rem exposure
- Close proximity to new NNSA facilities
- End state will be determined through a Core Team Agreement



Remote Operations Area



# 2012 - 2013 Planned Activities

- Continue Surveillance & Maintenance activities necessary to maintain safety
  - Removal and management of flammable and combustible materials
  - Roof Replacement
- Deactivation planning activities
  - Formation of Integrated Project Team
  - Develop and Implement Safety Basis to support deactivation activities
  - Restore required services to facilitate activities
  - Enhanced characterization of residual material in process cells
  - Perform Pu-238 migration studies to support conceptual model of the closed facility
  - Prepare deactivation alternative analysis
  - Initiate deactivation of cells with less residual material
  - End-State discussions with regulators



## 2012 - 2013 Planned Activities - continued

- Develop Defense Nuclear Facility Safety Board 2012-1 Response and Implementation Plan (summary of recommendations)
  - Immobilize and/or remove the residual Pu-238
  - Remove all transient and fixed combustibles that are not directly necessary for activities.
  - Ensure all necessary electrical equipment are in a safe configuration.
  - Evaluate operability of early detection and alarm systems
  - Ensure that an integrated emergency response plan is in place
  - Ensure that periodic coordinated drills in response to a simulated event at 235-F are conducted.



# Summary

- Continue to perform Surveillance and Maintenance to maintain facility safety
- Continue Deactivation activities and re-evaluate options in consultation with EPA and SCDHEC
- Address deactivation pre-requisites ( waste end state determination, Safety Basis revision) while planning work methodology



# QUESTIONS

