

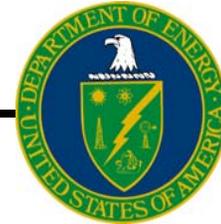
# **Area Completion**

## **Soil and Water Remediation Deactivation and Decommissioning**

**Yvette Collazo  
Assistant Manager  
Office of Closure Project**

# Mission Summary

---



- **MISSION**

- Remediate waste sites, groundwater, and surface waters to reduce risk to human health and the environment
- Deactivate and Decommission (D&D) excess facilities at SRS in support of the Area Completion Strategy

- **LIFE CYCLE SCOPE**

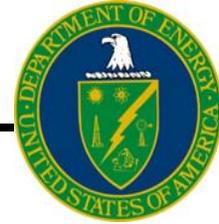
- 515 identified waste units (325 are complete and 43 are in remediation)
- 1055 facilities to be decommissioned (271 have been completed)
  - All major facilities and their ancillary structures will be decommissioned
  - End states are either in-situ or decommissioned to the foundation

- **NEAR TERM TO-GO SCOPE includes:**

- Area Completions
  - P-Area: in-situ reactor decommissioning
  - R-Area: in-situ reactor decommissioning
  - M-Area and D-Area
- F-Canyon (in-situ decommissioning)
- Groundwater units at the facility areas
- Other miscellaneous waste units and facilities

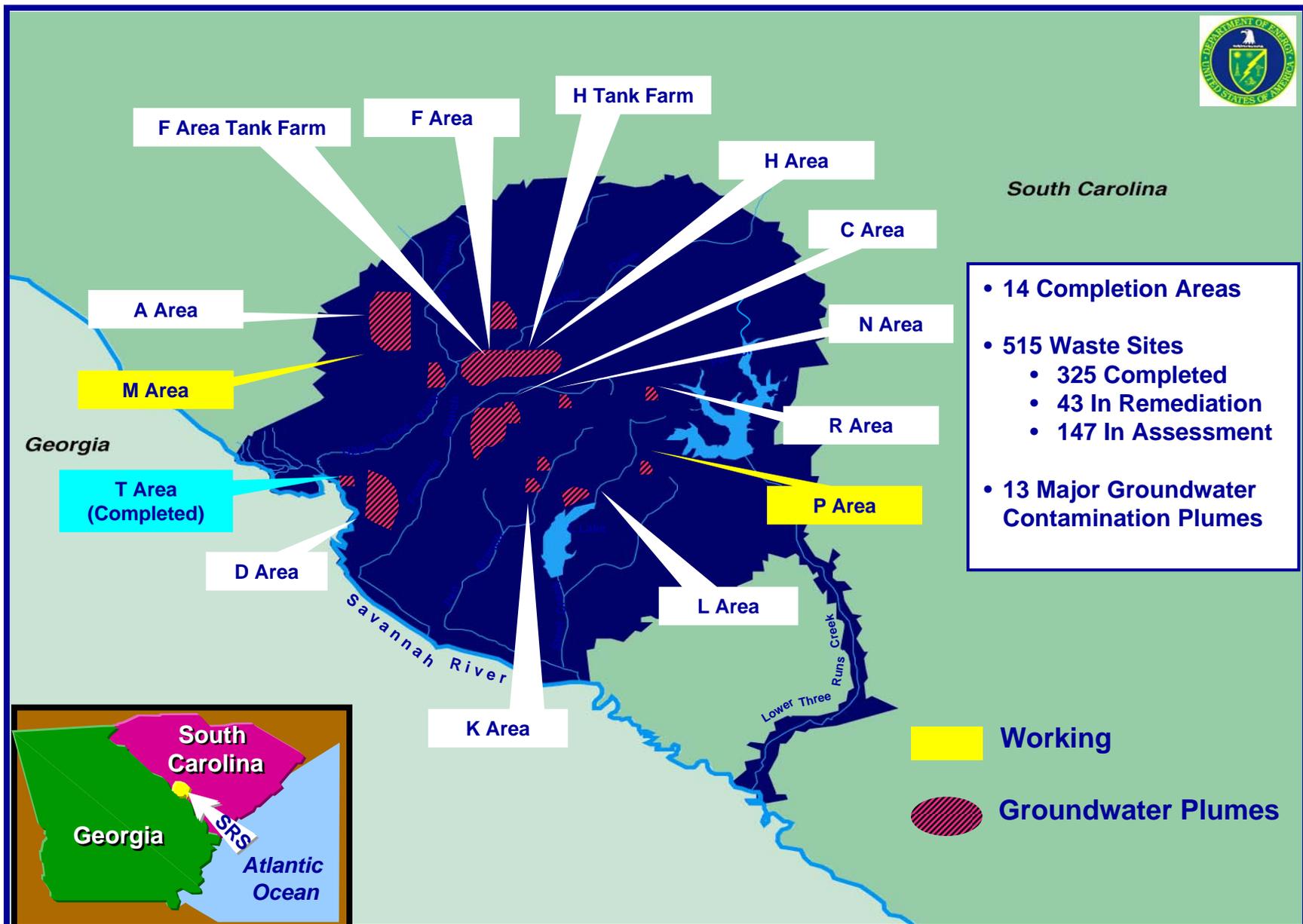
# Area Completion Strategy

---



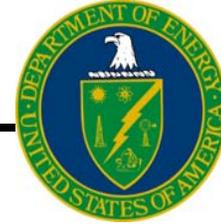
- Fully integrates D&D with Soils and Groundwater Project (SGP) scope to achieve 14 comprehensive Records of Decision
- Historical process:
  - Did not focus on any single area
  - Evaluated individual waste units (some located in remote areas) with much paperwork and higher costs
  - Did not address D&D facilities
- Area Completion process:
  - Addresses groupings of waste units and facilities in 14 geographic areas
  - Integrates D&D/SGP cleanup
  - Area End States determined up front with the regulators
  - Economies of scale in sampling, remediation and documentation (one set of documents for each of the 14 areas)

# Area Completions



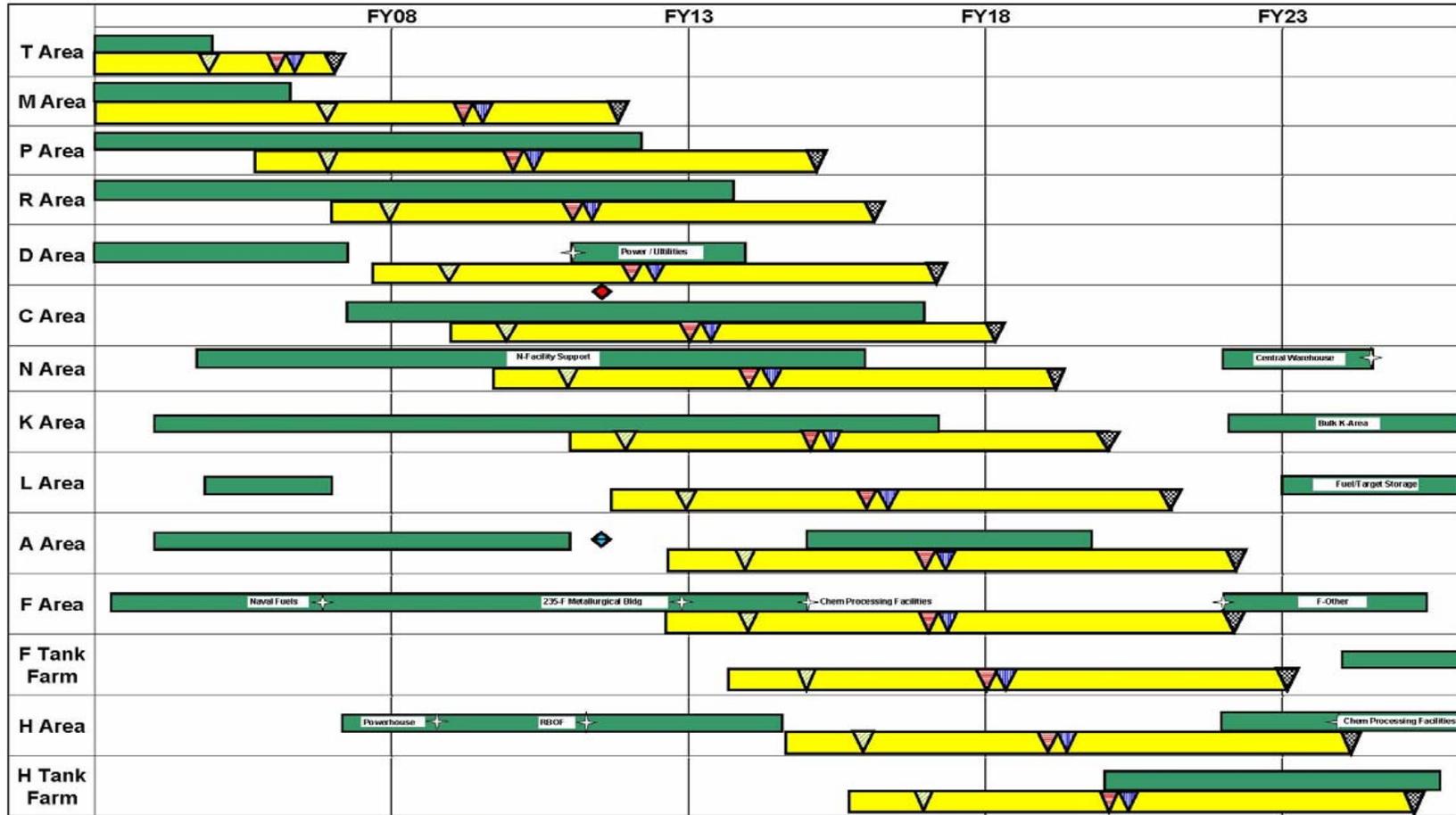
# Major Drivers

---



- SRS Federal Facility Agreement (FFA)
  - Cleanup agreement between DOE, Environmental Protection Agency (EPA), and South Carolina Department of Health & Environmental Control (SCDHEC)
    - Re-negotiated in 2005 to establish milestones consistent with Area Completion Strategy
    - 2006 FFA modifications
      - » Area Completion Defined
      - » D&D Process Defined
      - » New Appendix K added for D&D integration
  
- Resource Conservation Recovery Act (RCRA) Permit

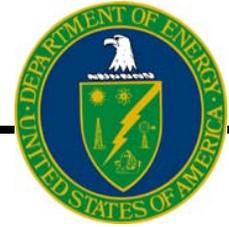
# FY06 Federal Facility Agreement Appendix E



**Legend**

- D&D
- FFA Appendix E FY2007 (10/9/2006) except T and M Areas
- Historical facilities disposition decision
- Key completions
- Field Start
- Issue ROD
- RA Start
- Rev. 0 PCR Submit
- SRNL complex transfer to new federal office

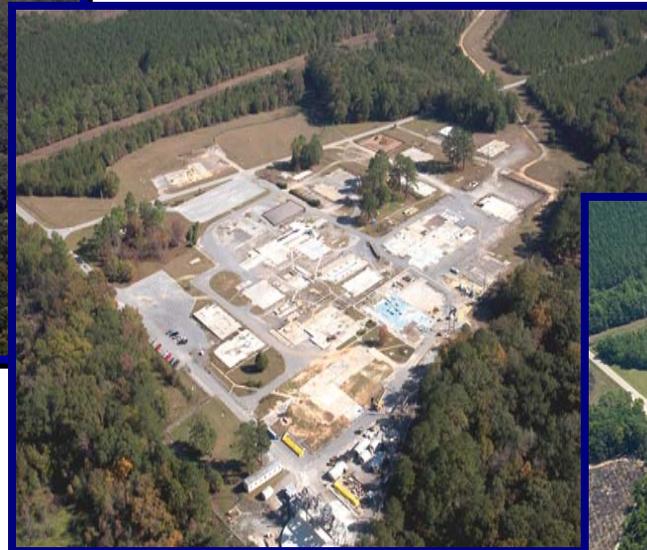
# Completed Area Closure



## T-Area Completion



Before



Completed

# Completed D&D Project



## Reactor Cooling Water Reservoir

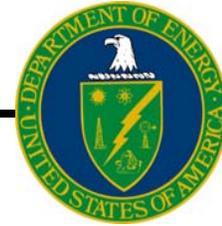


## In-situ Decommissioned



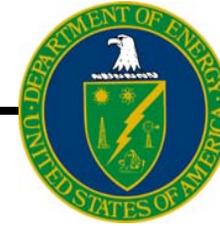
# Key Work Projects (2008-2012)

---



- M-Area Completion Achieved
- P-Area Completion
  - Remedial Action Start
- R-Area Completion
  - Interim Record of Decision (IROD) for Reactor
  - Remedial Action Start
- Conduct RCRA groundwater corrective action at closed F&H seepage basins to meet permit conditions
- Decommission other facilities, including F-Area Material Storage and Consolidated Incinerator Facility
- Complete remediation on more than 35 waste units
- Meet all SGP requirements (~275 milestones) and compliance activities for all waste units in assessment, remediation, operations and post closure monitoring

# Key Work Projects



## M-Area Completion



### ■ Current Status

- ◆ Dynamic Underground Stripping (DUS) construction completed, steam operations underway
- ◆ Three major Operable Units (OU) underway in M-Area
- ◆ All facilities decommissioned

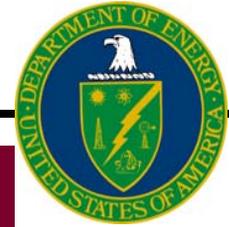
### ■ Remaining Actions (Post 2007)

- ◆ Complete Dynamic Underground Stripping steam operations in FY 2008 and project operations in FY 2011
- ◆ Start and complete construction on remedial actions on remaining Operable Units in M-Area
- ◆ M-Area closed by FY 2012



## 2<sup>nd</sup> SRS INDUSTRIAL AREA CLOSURE

# Key Work Projects



## P-Area Completion



## R-Area Completion



### ■ Current Status

- ◆ IROD for Reactor End State in Development
- ◆ Regulatory Milestones
  - Field Start met in 2006
  - Record of Decision (Oct 2009)
  - Remedial Action Start (Feb 2010)

### ■ Current Status

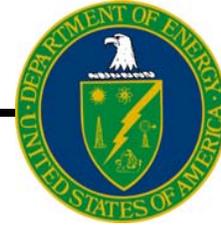
- ◆ Regulatory Milestones
  - Field Start (Sept 2007)
  - Record of Decision (Oct 2010)
  - Remedial Action Start (Feb 2010)

### ■ Remaining Actions Both Reactors (Post 2007)

- ◆ Potential work may include grouting, excavation, and disposal of Principle Threat Source Material (pipelines and soil), capping of selected waste units (i.e. ash basin), excavation and disposal of soils associated with spills
- ◆ Decommission Reactors

**FIRST SRS REACTOR AREAS TO BE COMPLETED**

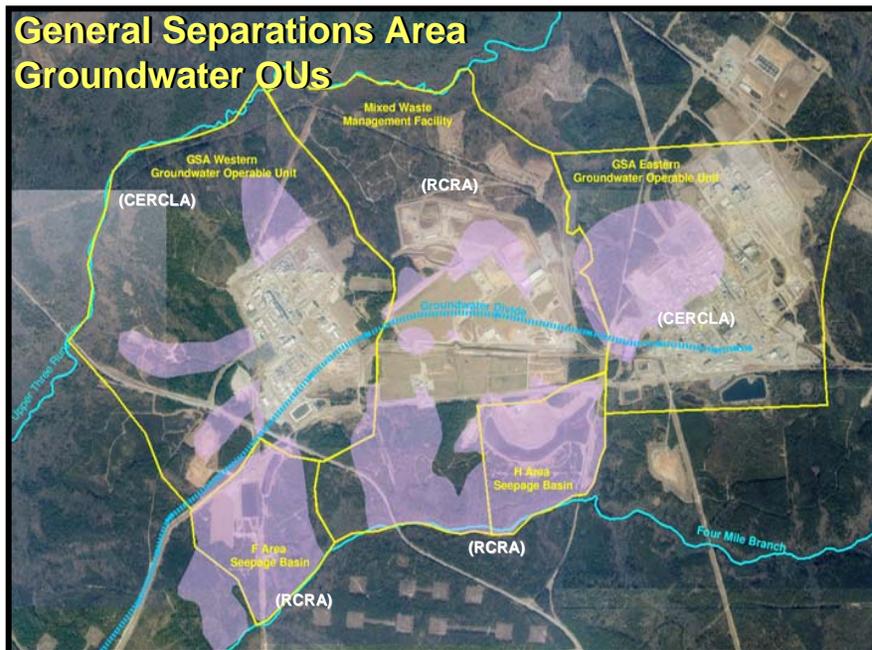
# Key Work Projects



## F/H-Area Groundwater

### ■ Current Status

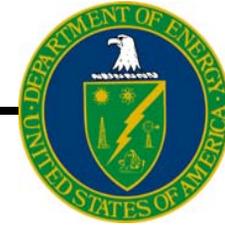
- ◆ F-barrier wall completed 9/13/04 and H-barrier wall installation completed 12/17/04 (4500 ft. underground barrier walls to slow down tritiated water and immobilize other contaminants)
- ◆ Conduct campaigns of base injection at F-Area as needed



### ■ Remaining Actions (Post 2007)

- ◆ Implement remediation to address creek contamination
- ◆ Develop and implement remediation to address seep line by 2010
- ◆ Meet RCRA permit conditions

# Key Work Projects



## Consolidated Incineration Facility

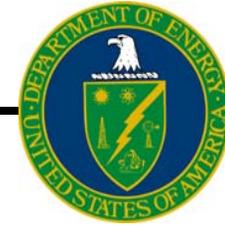


- **Remaining Actions (Post 2007):**
  - Decommissioned to slabs

- **Current Status:**
  - Deinventoried
  - Cold Stand-by



# Key Work Projects



## F-Area Material Storage



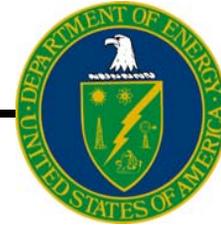
- **Current Status:**
  - **Deinventoried**

- **Remaining Actions (Post 2007):**
  - **End State TBD**



# Key Programs Challenges

---



- Managing unexpected field conditions
- Creating opportunities to improve project completion pace and cost performance including:
  - Streamlining characterization and remediation of miles of contaminated underground pipelines
  - Reducing groundwater remediation and extended legacy management costs
- Implementing reactor “in-situ” decommissioning that achieves safe, cost effective, permanent disposition
  - Incorporate waste consolidation when feasible and practical
- Funding Uncertainties