

# 2009 DOE Integrated Safety Management Conference



## ARRA Interfaces with the 2009 SRNS ISMS Phase II Verification

**Jeffrey Allison, Manager  
Savannah River Operations Office  
August 26-27, 2009**



# The Savannah River Site



- 198,334 acres, or about 310 square miles
- SRS workforce: Approximately 11,000
  - DOE-SR and DOE-NNSA
  - SRNS
  - SRR
  - Parsons
  - WSI-SRS
  - Shaw AREVA MOX Services



# SRS History (1950-present)



H Canyon  
and HB Line

## M&O Contractors

- E.I. du Pont de Nemours: 1950-1989
- Westinghouse/Washington Savannah River Company: 1989-2008
- Savannah River Nuclear Solutions: 2008-present

## Peak employment

- Historical: 38,000 in early 1950s (construction)
- Modern: 25,000 in early 1990s (reactor restart)

- **Produce and recover nuclear materials**
  - Tritium
  - Plutonium 238
  - Plutonium 239
- **Facilities**
  - Five reactors
  - Two chemical separations plants
  - Heavy water extraction plant
  - Nuclear fuel and target fabrication facility
  - Waste management facilities
- **SRS produced about 36 metric tons of plutonium from 1953-1988 – about one third of the nation's weapons-grade plutonium**
- **End of Cold War meant a whole different philosophy and approach to the nuclear arsenal**



# Current SRS Missions

## EM

- Management, stabilization and disposition of neptunium, uranium, plutonium and other nuclear materials
- Management and disposition of solid and transuranic wastes
- Liquid Waste Disposition and Tank Closure
- Receipt and management of spent fuel
- Savannah River National Laboratory operations
- Excess facility demolition
- Environmental remediation
- Site Security

75 percent

## NNSA

- Tritium operations and extraction
- Non-proliferation
- Uranium blending and shipping
- Foreign fuel receipts
- Mixed Oxide Fuel Fabrication Facility

25 percent



# American Recovery and Reinvestment Act

- **Funds provided: Over \$1.6 billion**
- **Jobs to be created/saved: ~3000**
- **States impacted: South Carolina & Georgia**
- **Project duration: Completion by 2011**
- **Reduce the EM footprint (operating facilities) at SRS approximately 40 percent, or 79,000 acres, by September 2011**
- **Clean up of legacy nuclear weapons production enables reuse of DOE resources, including land and infrastructure**



# Safety Strategy

- **Follow existing safety programs**
  - no short cuts or blanket exemptions for ARRA work
- **Expand work scope in areas with proven experience**
  - TRU Waste, facility D&D, and Soil Groundwater remediation
- **ARRA specific safety performance metrics**
  - expect performance equal to base work scope
- **Integrated Project Team**
  - DOE and contractor line personnel focused on ARRA in respective areas of responsibility
- **Utilization of established Subcontract Management mechanisms including Subcontract Technical Representatives**
- **Ensure ARRA workers are integrated into the existing site safety culture through training and mentoring**



# SRS Footprint Reduction

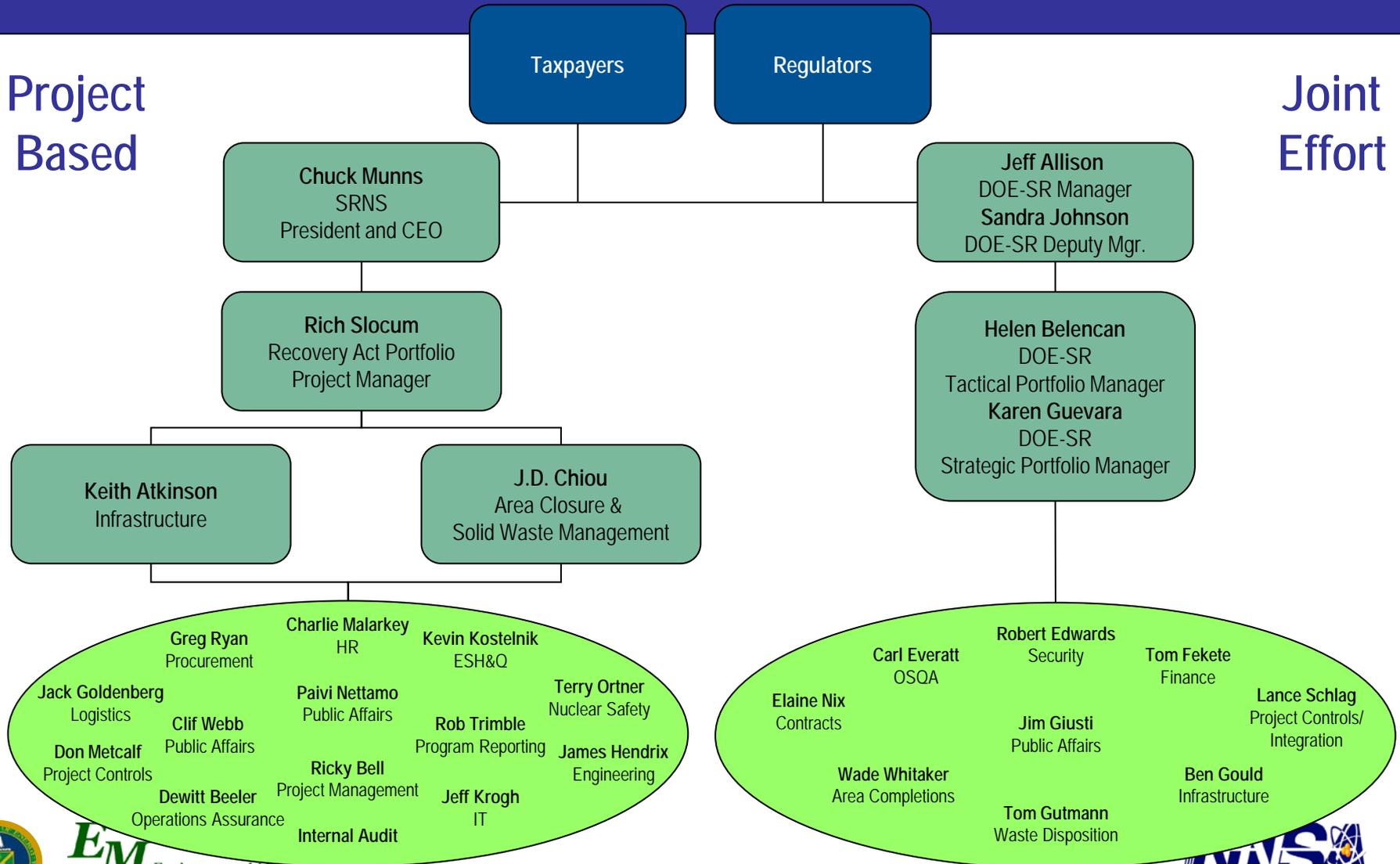


- Accelerate Area Completion in P, R, M, and D Areas, including decommissioning of P and R Reactors
- Eliminate 90 percent of Pu 238 source term in 235-F
- Ship / stage / make ready 4500 m3 legacy TRU waste for offsite disposal
- Ensure the reduction of environmental risk with large return on investment
- Achieve ~40% reduction of the site footprint

# ARRA Organization

Project Based

Joint Effort



# Accountability and Transparency Regulatory Agency Involvement

- **Air, Water, and RCRA permit planning & processing**
- **FFA & STP**
- **Process modifications**
  - Accelerated review schedules
  - Co-location
- **End State planning**



# Oversight of ARRA

- **SRNS conducted ISMS Phase II Verification Review**
  - Review addressed base work and ARRA activities
  - Mature program in place, however, numerous improvement opportunities
- **DOE-SR Validation of ISMS Verification**
  - Shadow oversight of contractor verification
  - Independent verification of selected areas
  - Concluded contractor conducted comprehensive and candid assessment
- **SRNS FEB Independent Assessment**
  - Readiness evaluations prior to starting work
  - Periodic Evaluations during conduct of ARRA activities
  - Early training effectiveness review found knowledge retention deficiencies in new hires
- **Experienced DOE FR/SME Oversight augmented by support service contract personnel**



# Safety Metrics

## M&O ARRA OPERATIONS

(April 1, 09 to Aug. 3, 09)

	TRC	DART
FY09 No.	1	1
FY09 Rate	0.52	0.52
FY09 Goal	0.55	0.19

## M&O BASE OPERATIONS

(Oct. 1, 08 to Aug. 3, 09)

	TRC	DART
FY09 No.	23	6
FY09 Rate	0.48	0.13
FY09 Goal	0.55	0.19



# Summary

- **Safety remains top priority**
- **Site ISMS programs are in place and effective**
- **ARRA work is being conducted using the existing ISMS programs**
- **No relaxation of safety expectations**



# SRS Website

- For further information and follow of progress at SRS on ARRA, visit [www.srs.gov/recovery](http://www.srs.gov/recovery)

