



U.S. DEPARTMENT OF
ENERGY

Presentation to the SRS Citizens Advisory Board

Environmental Management Cleanup Program Integrated Lifecycle Estimate Update

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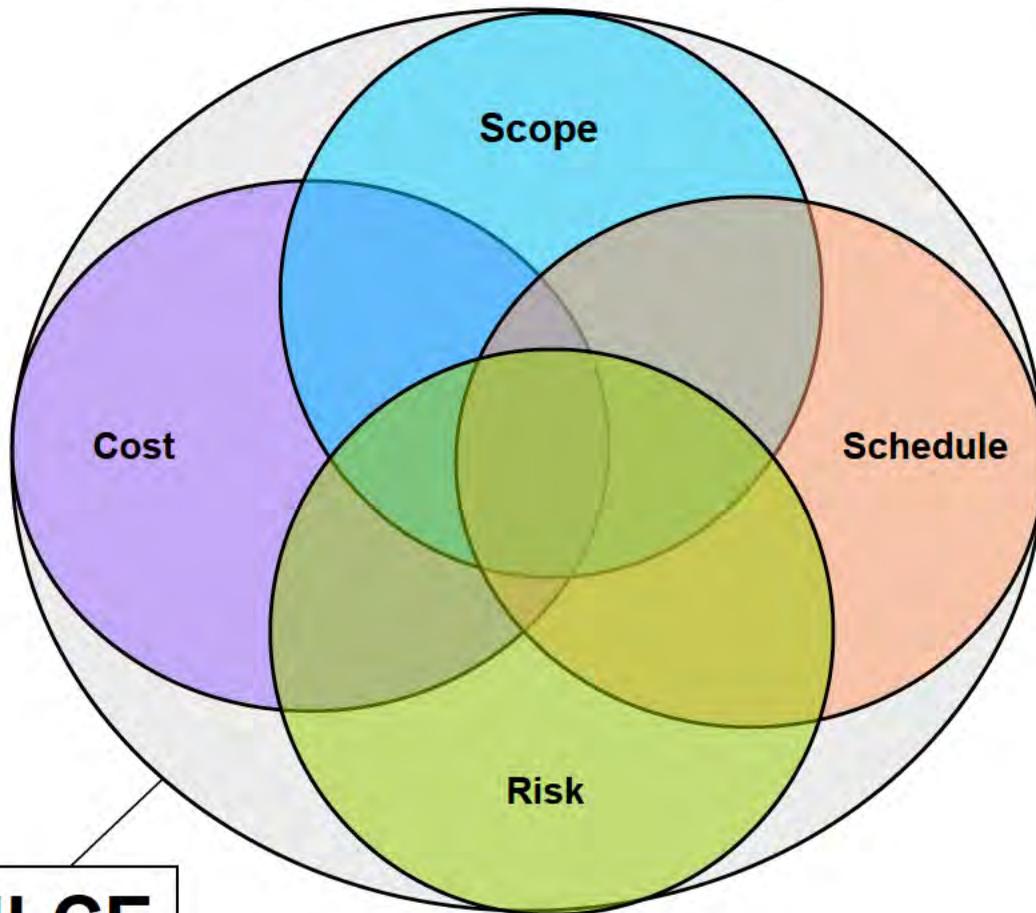
EM Environmental Management
safety ♦ performance ♦ cleanup ♦ closure

Purpose:

- Satisfy Strategic & Legacy Management Committee Request for Annual Update of the Lifecycle Estimate
- Define What is the Environmental Management Lifecycle Estimate
- Describe Considerations used in Development of the Lifecycle Estimate
- Provide Rationale for the Lifecycle Estimate
- Share the Results and Impacts of the Lifecycle Update

The Lifecycle Estimate is an Integrated Plan Describing the Remaining Cleanup Programs at SRS

The Four Estimate Components are:



ILCE

Four Functional Areas by Program

1. Nuclear Materials
 - Nuclear Materials
 - Spent Nuclear Fuel
2. Waste Disposition
 - Solid Waste
 - Radioactive Liquid Waste
3. Area Completion
 - Soil and Groundwater Remediation
 - Facility Deactivation and Demolition
4. Site Support
 - Safeguards and Security
 - Community and Regulatory Support

Drivers, Interdependencies and Schedule Logic

Primary Drivers

- HQ Identified Legacy Liquid Waste (LW) Disposition as one of the Department's Critical Path Mission
- New Technology Opportunities Accelerated LW Completion Schedule

Program Operations

- LW operations is affected by Construction Completion of Salt Waste Processing Facility
- Nuclear Materials (NM) Operations affected by LW Completion
- PBS 30 Activities increase after Completion of LW and NM Operations
- Solid Waste E-Area Trench Disposal quantities affected by PBS 30 Facility D&D and Release Site Remediation

Other Support Functions

- Safeguards and Security Program is affected by K-Area De-inventory
- Community & Regulatory Support

➤ Nuclear Material Strategy Change

- Processing Pu for Mixed Oxide (MOX) feed
- Blend down of Pu for Waste Isolation Pilot Plant (WIPP) disposition
- Deleted Plutonium Line Item Project (PuP)

➤ Liquid Waste System Plan Revision 17

- Reduced number of Saltstone Disposal Units (SDUs) (from 42 to 12 mega SDUs)

➤ Operational Impacts from Delayed Technical Approvals

- No Direct Pu shipments to WIPP - Continue Pu blend down operations
- No Idaho SNF fuel exchange
- No processing SNF (except vulnerable fuels) and nearing storage capacity limitations
- No identified Final National Repository for Stabilized SNF and High Level Waste Canisters

➤ Re-aligned PBS100 some work scope to PBS 13 and PBS 30

- e.g. U.S. Forest Service and Savannah Ecology Laboratory

Impacts of the FY2012 Integrated Lifecycle Estimate (ILCE)

- Incorporates the site approved SRNS FY2012 - 2016 Contractor Performance Baseline, the approved SRR Liquid Waste System Plan Revision 17, and the Salt Waste Processing Line Item Project
- Extended EM Completion Schedule 8 years from FY2034 to FY2042
- Cost Increase of \$13.6B
- Lifecycle Estimate Range of \$66.6B to \$74.0B with 3 year Schedule Contingency

Primary Source of Cost Increase

- Nuclear Materials Stabilization and Disposition
 - H-Canyon operations extended 10 years from FY2021 to FY2031
 - H-Canyon turnover to D&D extended 8 years from FY2021 to FY2033
 - Pu de-inventory extended 7 years from FY2024 to FY2031
- Spent Nuclear Fuels (SNF) Stabilization and Disposition
 - SNF Operations extended 12 years
 - No Idaho National Laboratory Fuel Exchange and No SNF Processing
 - Expectations to Initiate Project for SNF Interim Dry Storage

Primary Source of Cost Increase (cont.)

- Solid Waste Disposition
 - Extended 8 years due to extension of other SR programs
 - PBSS 100 DOE contracts and grant work scope transferred to PBS 13
- Liquid Waste
 - System Plan 17 Strategy Extended operations from FY2026 to FY2028
- Safeguards & Security
 - Extended Operations 7 years, aligned with K-Area Pu De-inventory Completion
- Soil & Groundwater and Facility D&D
 - Extended Operations 8 years
 - Reflects D&D of Project for SNF Interim Dry Storage
 - PBSS 100 DOE contracts and grant work scope transferred to PBS 30
- Community & Regulatory Support
 - Extended Operations 8 years
- Extended lifecycle 8 years, adding Pension and other Indirect Costs for additional 8 years

Long Term Stewardship Cost Reduction

- Due to PBS 30 extended operations, previous LTS surveillance and maintenance activities now fall into the outyears

**SRS FY2012 EM PROGRAM
LIFECYCLE ROAD MAP**

Summary

- The FY2012 Lifecycle Estimate Reflects Updated Point-in-Time Strategies and Fully Describes the Remaining SRS Scope
- The Lifecycle Estimate Process Resulted in a High Confidence Estimate for the Remaining Lifecycle, Fully Describing Environmental Management (EM) scope at SRS
- The Lifecycle Estimate is a Key Component to the DOE-SR Federal Risk Management Plan Annual Update and the EM Environmental Liability Annual Review
- As a Result of the Strong Lifecycle Estimate Process, SRS Gained Confidence with the EM Liability Auditors Resulting in No Findings and Reduced Emphasis on SRS for the Last Two Years.

Acronyms

ABB	Analytical Building Block
ARRA	American Recovery & Reinvestment Act
CPB	Contractor Performance Baseline
D&D	Deactivation & Decommission
EM	Environmental Management
FY	Fiscal Year
ILCE	Integrated Lifecycle Estimate
INL	Idaho National Laboratory
LTS	Long Term Stewardship
LW	Liquid Waste
MOX	Mixed Oxide
NM	Nuclear Material
PBS	Program Baseline Summary
PILT	Payment-In-Lieu of Taxes
S&GW	Soil and Groundwater
SNF	Spent Nuclear Fuels
SRNS	Savannah River Nuclear Solutions, LLC
SRR	Savannah River Remediation, LLC
WBS	Work Breakdown Structure
WIPP	Waste Isolation Pilot Plant
WSI	Wackenhut Services, Incorporated

BACKUP

SRS FY2011 EM PROGRAM

LIFECYCLE ROAD MAP