



Solid Waste Stabilization and Disposition

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Disposition Project**



Mission

SRS treats, stores, transports, and disposes waste from ongoing site Environmental Management (EM) cleanup work and from the National Nuclear Security Administration (NNSA) and other programs performing work at SRS. SRS is committed to disposition this waste in an environmentally sound and cost effective manner through the implementation of pollution prevention, waste minimization and waste certification programs.

Description of **Scope**

- Treatment, storage, transportation, and disposal of all waste generated at SRS:
 - TRU Waste - Focus on processing legacy stored TRU waste for shipping to WIPP:
 - Certification of waste to meet WIPP WAC
 - Segregation & disposal of waste not meeting WIPP WAC
 - Container repackaging into compliant containers to meet WIPP and DOT requirements
 - Hazardous Waste - receive, store, package, and transport for treatment & disposal off-site
 - Mixed Waste - receive, store, package, treat, and transport for disposal off-site
 - Low-Level Waste - receive, store, package, transport and dispose on-site and/or off-site
 - Sanitary Waste - collect and transport to sanitary landfill
 - Pollution prevention/waste minimization

End State Objectives

All legacy hazardous, mixed and transuranic (TRU) wastes will be disposed of in compliance with applicable regulations and requirements.

SRS newly generated wastes resulting from the EM cleanup project and other programs will be disposed of as the waste is generated to prevent a legacy waste problem from being created for future generations.

Assumptions

- EM will only operate Solid Waste facilities through the completion of SRS EM mission
- EM will provide Solid Waste services to non-EM waste generators. No new waste streams from non-EM waste generators will be dispositioned by EM other than those currently planned
- TRU Waste:
 - Non Destructive Assay and Non Destructive Examination equipment to characterize large container TRU waste will be provided by 9/30/2007
 - Central Characterization Project will fund and operate non-drummed container WIPP certification 9/30/2007 – 9/30/2010
 - New Mexico Environment Department approval of permit modification to eliminate visual examination and headspace gas analysis requirement by 11/30/2006
 - NRC issue TRUPACT-III certification by 12/30/2007

E Area Waste Facilities

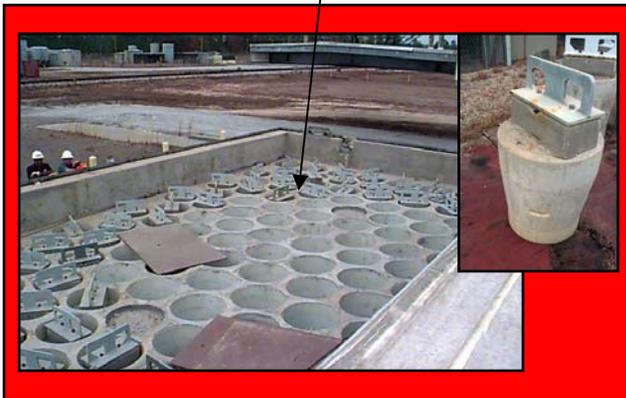
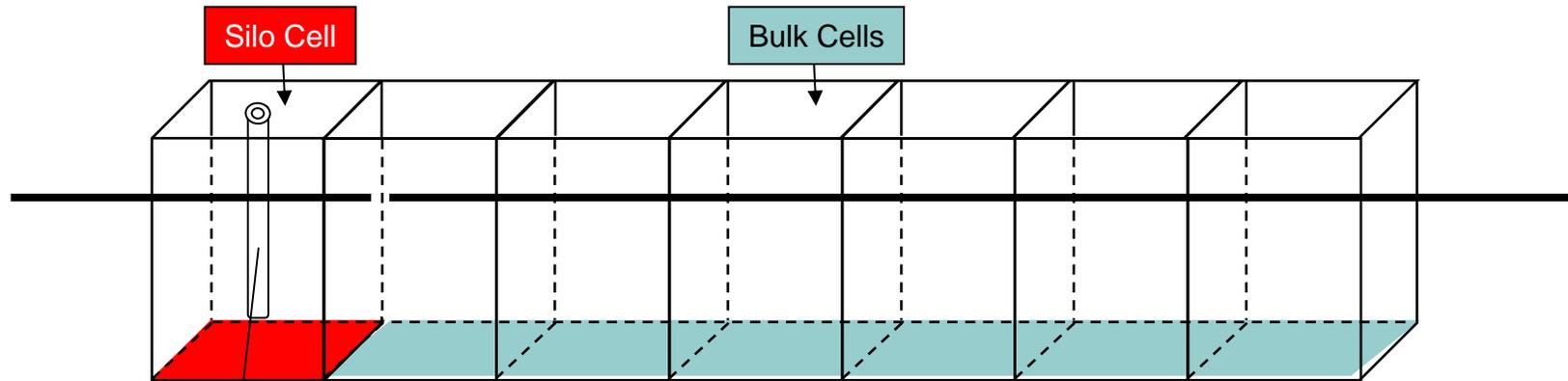


Low Activity Waste Vaults (LAWV)



- ~ 11% of the total waste disposed goes to the LAWV
- Utilized for waste packages less than 200mr/hr containing radionuclides that require additional separation from the environment
- 145' wide X 643' long X 27' high
 - 12 cells, each holds 1,000 B-25s (90ft³)
- Capacity of 1.7 million ft³ or 47.6K m³
- Operational in 1994

Intermediate Level Vaults (ILV)



Silo Cells and Silo Plug



Grouting a cell layer

- Began operations in 1994, contains one silo cell with 142 silos and six bulk cells
- Six bulk cells, total capacity of 6720 m³
- ~2% of the total waste disposed of goes to the ILV

Slit Trenches (ST)



- Began operations in March 1995
- 5 individual trenches = 1 Slit Trench disposal unit
- Basically same footprint as the LAWV
 - Each trench is 20' x 20' x 650', 28,800 m³ capacity (top 1.2m backfill)
- Utilized for slightly higher contaminated material than ET, soil, & rubble
- ~57% of the total waste disposed of goes to the STs

Components in Grout (CIG)



- Began operations in 2001
- 5 individual trenches = 1 CIG disposal units
- Basically same footprint as the LAWV
 - ✓ Each trench is 20' x 20' x 650', 28,800 m³ capacity (top 1.2m backfill)
- Utilized for contaminated equipment and components
- 1 foot of grout is poured below, above and around the component
- ~ 1% of the total waste disposed of goes to CIG

Engineered Trench 1 & 2 (ET1 ET2)



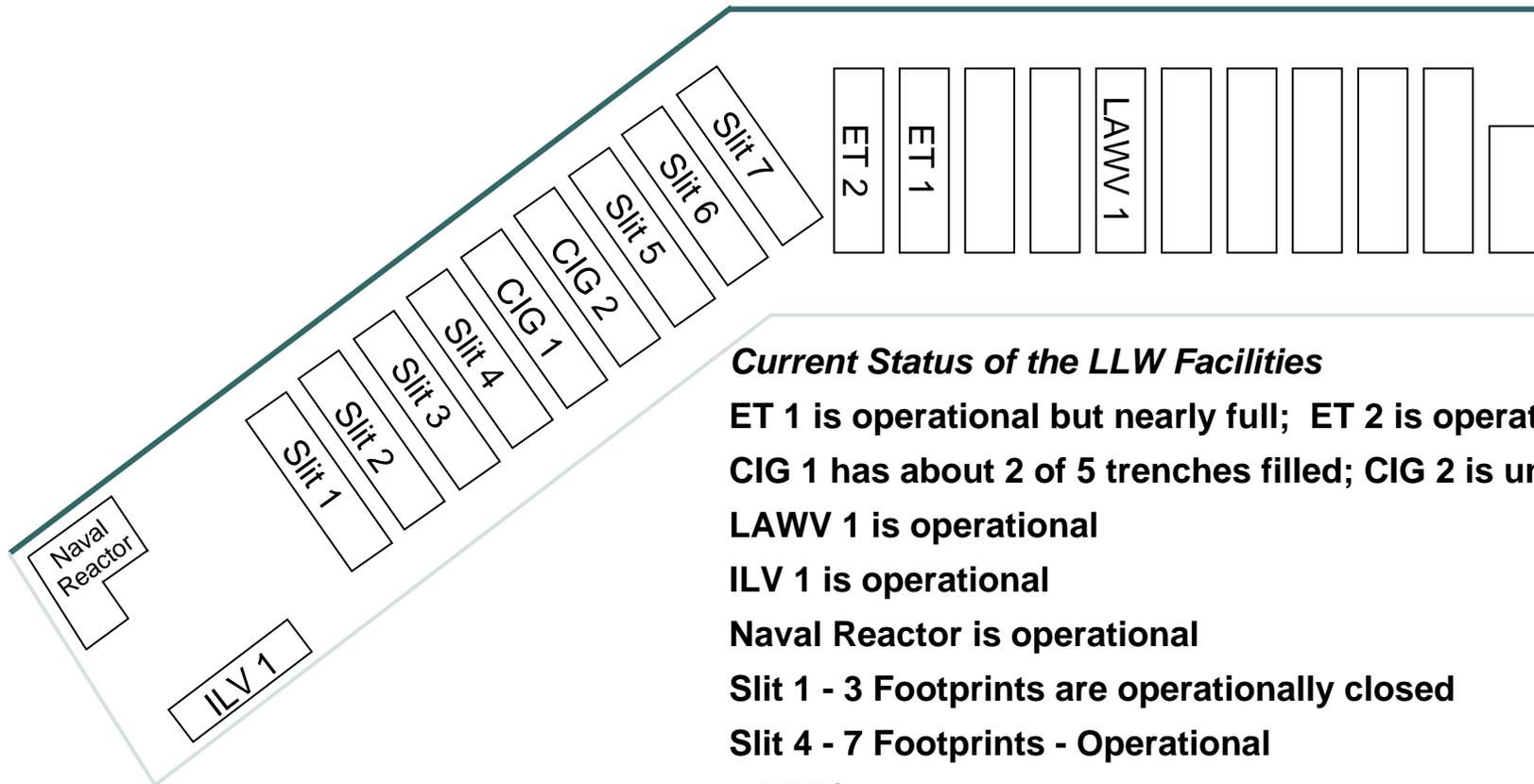
- Began operation of ET1 in Feb 01 and ET2 in June 04
- Utilized for very low contaminated LLW
- Basically the same footprint as the LAWV – 150'x 20'x 650', 41,200m³ capacity
- Extended the life of the LAWV by approximately 14 years
- ~27% of the total waste disposed of goes to the ET

Naval Reactor Pad (NRP)



- Utilized for the receipt and disposal of Naval Reactor Components from offsite sources
- ~1% of the total waste received goes to the NRP

E-Area Low Level Waste Facilities



Current Status of the LLW Facilities

**ET 1 is operational but nearly full; ET 2 is operational
CIG 1 has about 2 of 5 trenches filled; CIG 2 is unused**

LAWV 1 is operational

ILV 1 is operational

Naval Reactor is operational

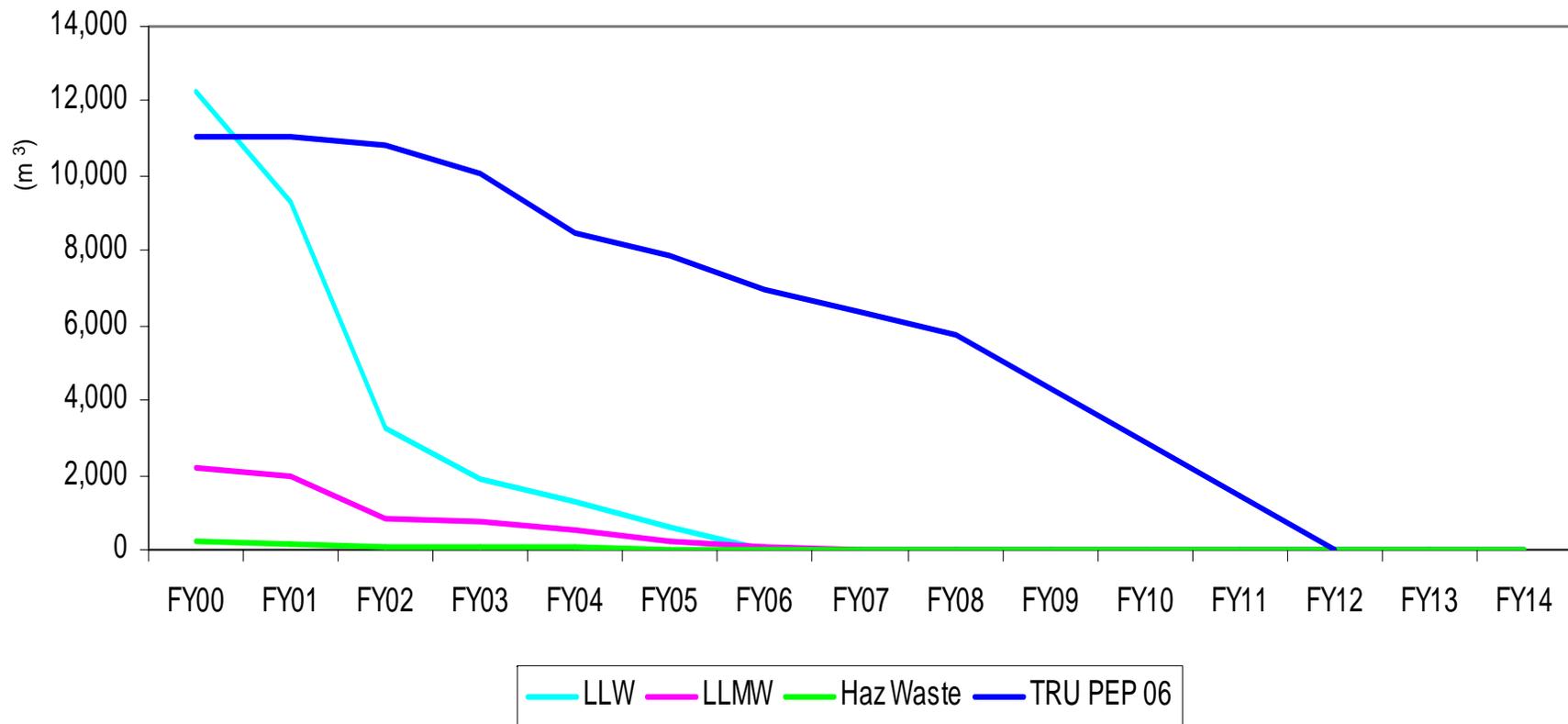
Slit 1 - 3 Footprints are operationally closed

Slit 4 - 7 Footprints - Operational

NOTES:

- Slit Trench, Engineered Trench, CIG and LAWV Footprint is approximately 150' by 650'**
- One Slit Trench footprint contains 5 trenches, each 20' X 20' X 650'**

Legacy Waste Storage Volume Reduction



Legacy LLW has been completed. Legacy MW/HW should be completed in FY07.

Risk Groupings

Risk Category Title	Description
Regulatory, Stakeholder and AB Concerns	Risks relating to Federal, State and local stakeholder actions such as external legislative changes, lawsuits and stakeholder approvals such as permitting, licensing and authorization bases.
Funding Priorities / Resources	Risks relating to funding shortfalls for the SWMF brought about by shifting priorities within Federal Government, DOE, and SRS Contractor(s). Includes cross-cutting resource issues such as demographics and availability of specialist resources.
Waste Characterization	Risks relating to waste disposal issues, either from significant technical mischaracterization or from poor estimates of waste volume leading to exceedance of disposal capacity.
Process / Operation Upset	Risks associated with an operational event (explosion, deflagration, spill, equipment malfunction) leading to a period of inability to operate normally.
External Vendor/ Interface Events	Risks related to issues at external vendors or other DOE sites used for waste treatment and disposal. Includes vendor non-availability and liability issues for emergent discovery conditions.
Transportation	Risks related to a significant transportation event leading to either a shutdown of transportation of wastes or a significant impact to operations.