



Environmental Management System

Equipment & Materials Disposition (EMD) Project

Cleanout & Disposition Toolkit

Denny Hjeresen, EMS Program Manager

Debbie Bryan, EMD Project Leader

Jennifer Nisengard, EMD Team

Marjorie Wright, EMD Team

Margie Stockton, EMD Team





Cleanout Overview

- Identifying the Problem
 - EMS process identified and made an institutional priority
 - Allowed cross organization team to be formed
 - Problem is extremely multidisciplinary - so is answer
- Approach: makes things move while getting data
 - Cleanout projects initiated through P2 Program
 - Toolkit developed out of difficult experience
 - Safety, security, cost, salvage, disposition problems
 - Documented the “how to” to make it easier for others
- Highlighted successes to engage more organizations
 - Awards and cost benefit demonstrations
- Institutional process changes to prevent “refill”

Safety for You, Security for the Nation, Environment for our Future

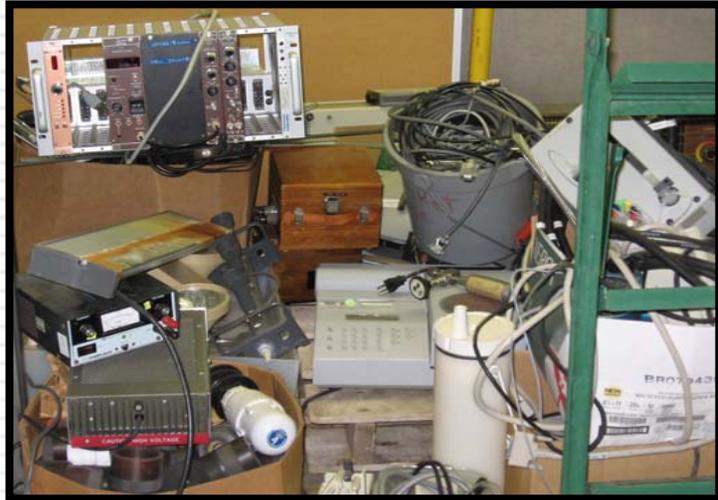


Converging Drivers for Walkdowns & Cleanouts

Lab-wide EMS Cleanout Goal

Compliance

Hygiene & Safety



Space Reduction Initiative

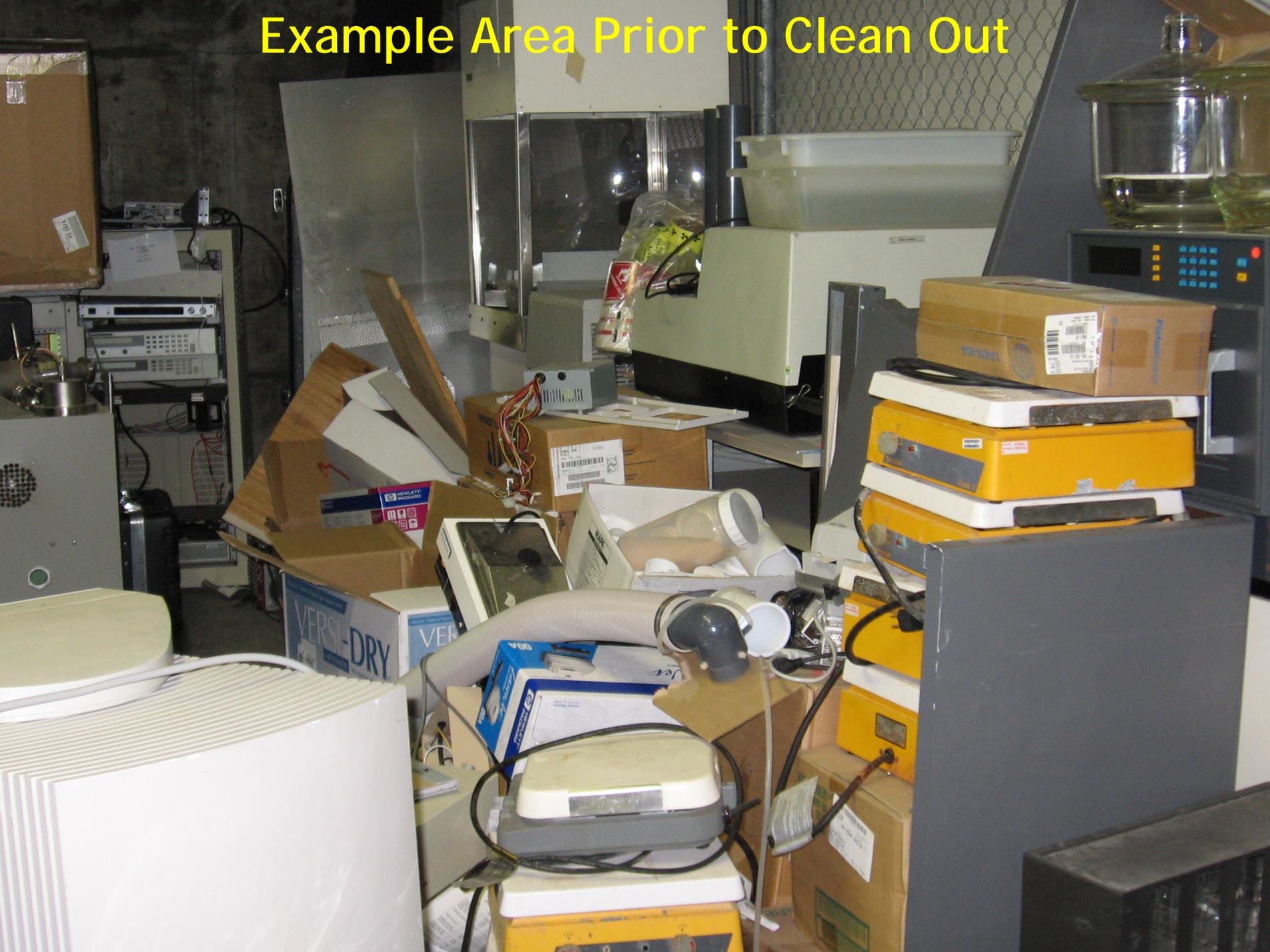
Documents & Media



Space & Waste Recharges

Security for the Nation, Environment for our Future

Example Area Prior to Clean Out



Hallway Area
Prior to Clean Out





Hallway Area
Prior to Clean
Out

No Record of
Prior Use

Rad waste storage was relocated as a result of the clean out.



Example Prior to Clean Out

“orphaned” records

Lead bricks



Unused equipment in original packaging

Lead “pigs” for transport of radioactive samples – one contained an orphaned sample.



Prior to Clean Out

Electroplated

Autopsy Tissue

Planchets

from Rocky Flats

12-23-86

Lu

SET NO. T-86-90 Am

9 47-2 SPLEEN

10 47-2 FAT FROM KIDNEY

11 47-2 R. LUNG

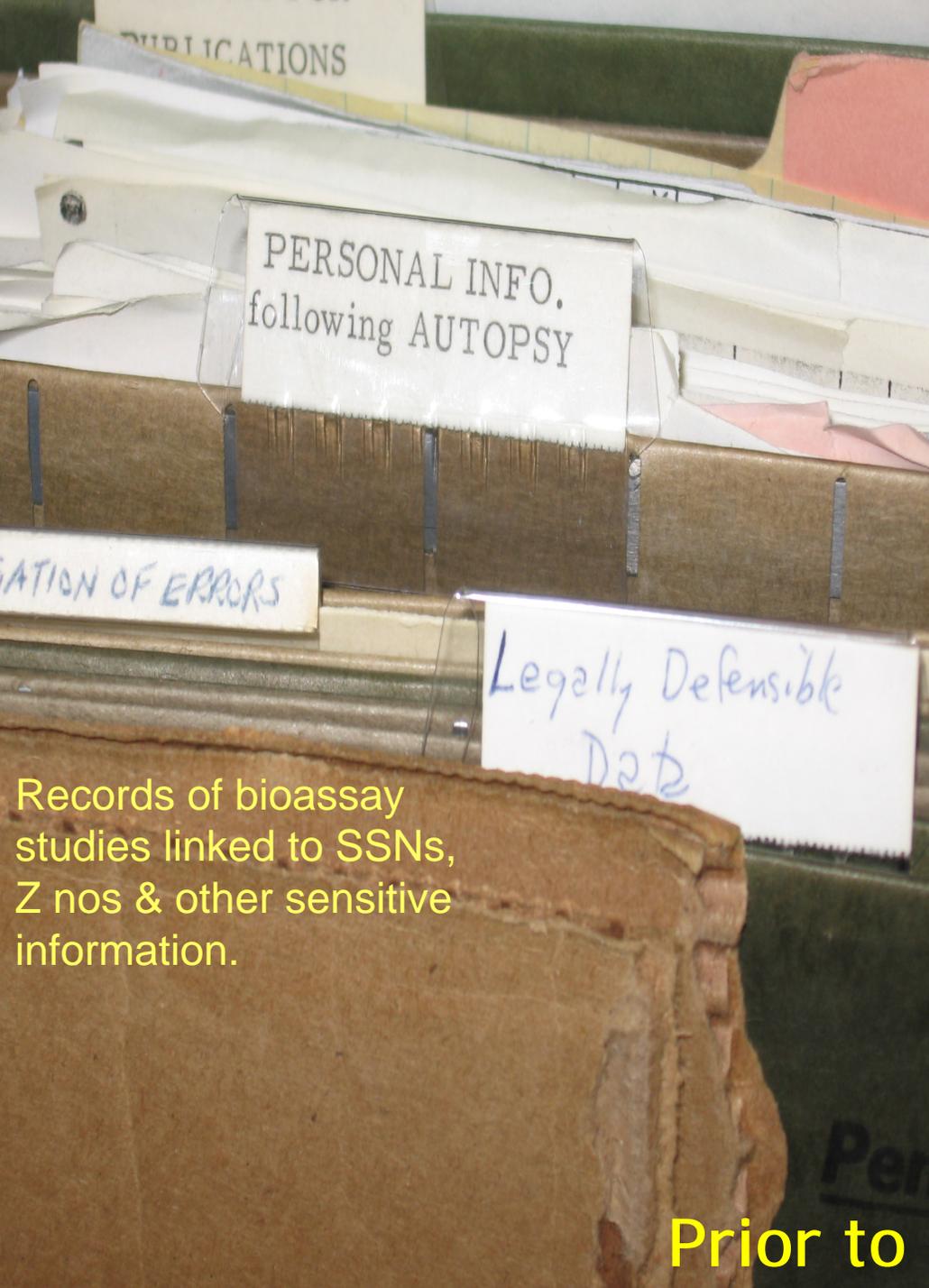
12 15-2 INTESTINE, SMALL

13 DESCENDING COL

14 STOMACH

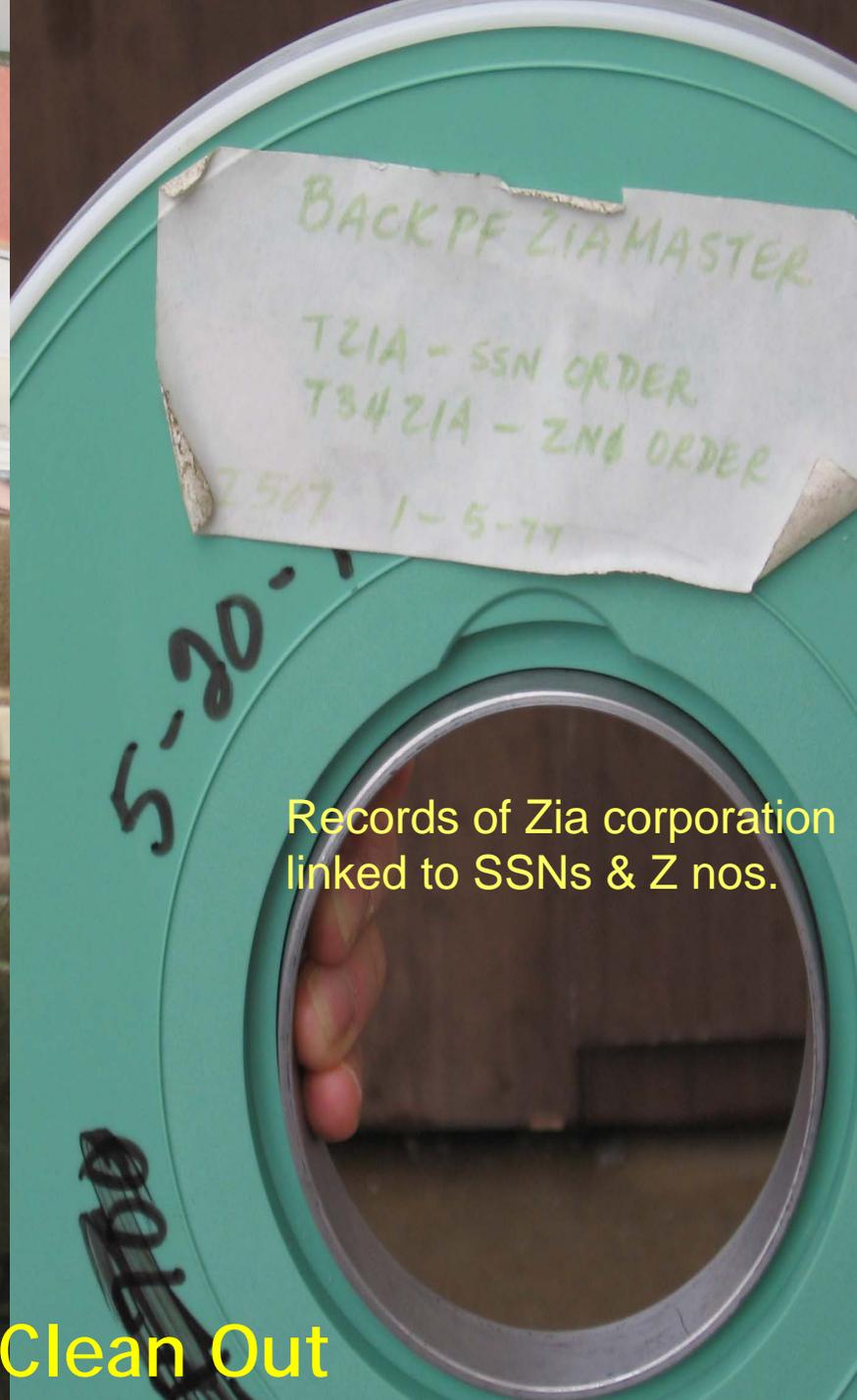
15 HEART

16 MUSCLE



Records of bioassay studies linked to SSNs, Z nos & other sensitive information.

Prior to Clean Out



Records of Zia corporation linked to SSNs & Z nos.

- Disposition and Cleanout Toolkit guides process
 - Safety & Security
 - Where to go & who to call
 - Walkdown assigned spaces, gather information & set realistic goals
 - Cleanout safely, compliantly and cost-effectively
- Made toolkit available on the EMS webpage under “Disposition” on the left menu (http://ems.lanl.gov/cleanout_Toolkit.shtml)
- cleanitout@lanl.gov



Toolkit Layout



- Section 1 (Introduction)
 - Safety, security & compliance (RCRA, unknowns)
 - Tips for using the toolkit
- Section 2
 - Steps for a walkdown or cleanout
- Section 3
 - Emphasis & tools for reuse & recycle
- Section 4
 - Links & resources for wastes
- Sections 5 - 9
 - Property
 - Paper and media
 - Chemicals
 - Miscellaneous items & equipment
 - Radioactive items & materials

Safety for You, Security for the Nation, Environment for our Future



Using the Toolkit

1. Plan walkdown and include key SMEs (e.g., EMD, ESHQ, Property Admins, WMCs, FODs, tenants, owners)
 - Check space, property databases and interview space users
2. Conduct walkdown with a checklist of key issues
 - Alert appropriate SMEs if there are hazards or issues
 - Identify or assign owners to all items
 - Identify what you don't want
 - Use toolkit to figure out how to get rid of it
3. Plan cleanout
 - Pre-order boxes, bins, roll-offs, trucks, labor and SME support
4. Conduct cleanout
 - Reuse, recycle, transfer, dispose, or assign to accountable owner & properly store
 - Evaluate ability to prevent future excess with questionnaire

Safety for You, Security for the Nation, Environment for our Future



Accomplishments

- Completed over 27 targeted cleanout projects
- These projects are cleanouts of specific items such as waste, lead, gas cylinders, excess chemicals and equipment.
- Targeted cleanout projects have resulted in the disposition of:
 - over 13 m³ of low level waste
 - 1000 lbs mixed low level & hazardous waste, and 400 kg of hazardous waste;
 - recycle of 15 roll offs of clean metal;
 - recovery of 14,000 unused cardboard boxes for future use;
 - disposal of over 10,000 excess chemicals;
 - salvage of 22 pick up trucks of excess equipment; and
 - disposition of unwanted lead bricks / pigs and Fluorine & HF cylinders.
- Direct intervention during early retirement (439 people)



Area Nearing
Conclusion of
Clean Out



**Area After Clean Out &
Installation of Shelving**

New Records Storage Area

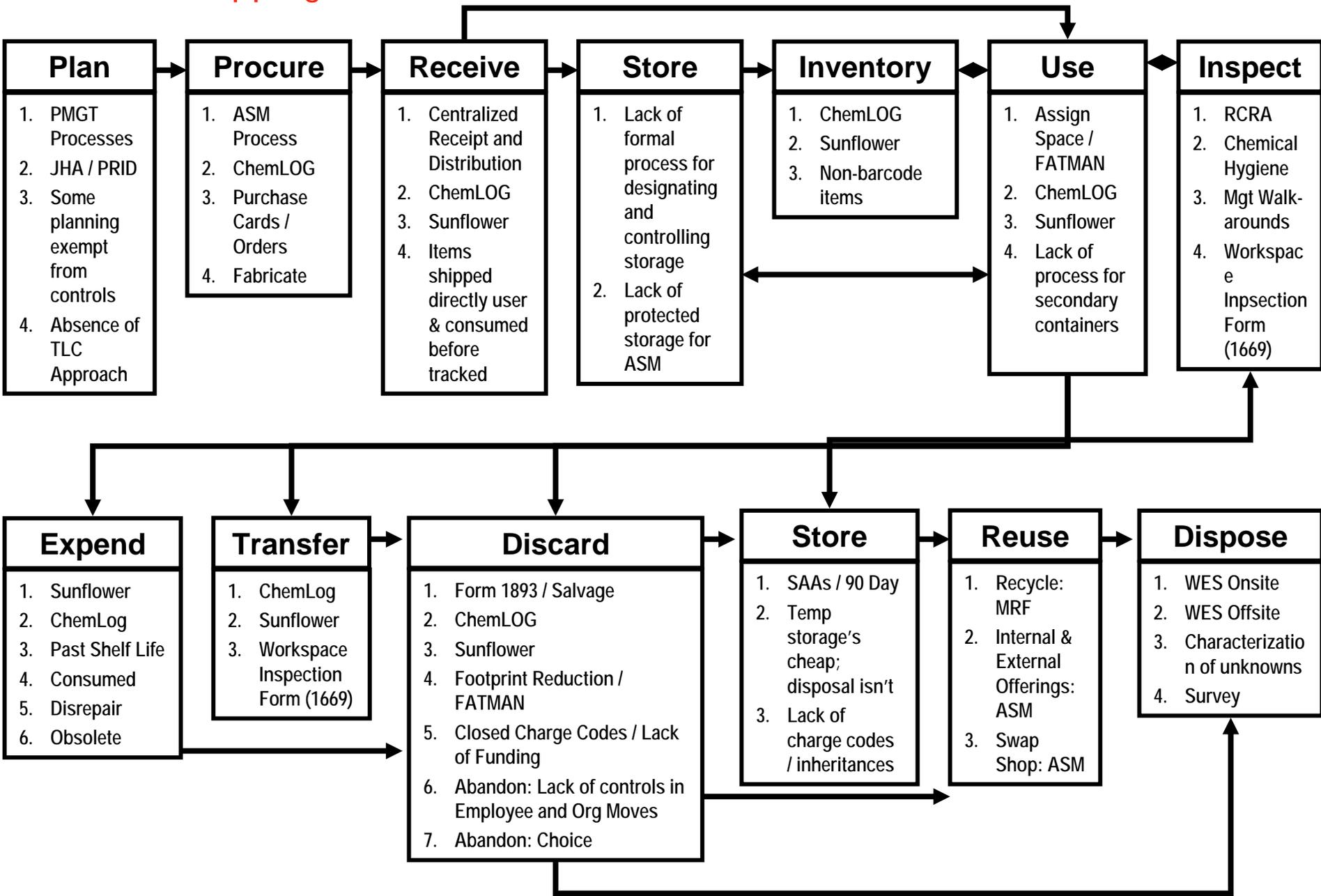


ems Key is to Change Institutional Processes

- Changed departure process to require identification and disposition of equipment and materials
- Making walkdowns and cleanouts an EMS action for Directorate and Division level organizations
- Addressing cost incentives and disincentives
- Large scale Kaizen event sponsored by Principle Associate Director
 - 50+ people involved in scoping and Six Sigma Teams
 - Resources to change systems

Safety for You, Security for the Nation, Environment for our Future

Kaizen Mapping





Summary

- Problem is so pervasive that it takes an institutional commitment to tackle - but.....
- Local action is required to make anything happen
- Money is a barrier but inertia is a bigger one
- Long-term - Lab and sponsors must accept roles in life-cycle management of materials and equipment from programs

Safety for You, Security for the Nation, Environment for our Future