



U.S. DEPARTMENT OF
ENERGY



Environmental Management Advisory Board

March 31, 2010

Merle Sykes
Chief Business Officer
Environmental Management



EM *Environmental Management*

safety ❖ performance ❖ cleanup ❖ closure

www.em.doe.gov

EM is Embarked on a Journey to Excellence

Our Vision:

“EM completes quality work safely, on schedule and within cost, and delivers demonstrated value to the American taxpayer.”



Assistant Secretary

Principal Deputy Assistant Secretary

**Chief
Technical
Officer**

**Chief
Business
Officer**



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EM Program Goals and Strategies

PROGRAM GOALS:

- Risk Reduction
- Maintain Compliance
 - American Recovery and Reinvestment Act (ARRA)
- Improve Project Performance
- Establish Strategic Options

STRATEGIC GOALS:

- Safety Performance
- Project Management
- Management and Leadership Excellence
- Headquarters and Field Alignment
- Science and Technology

DISCUSSION TOPICS:

- Planning and Budget
- Restructure of Project Portfolio
- Procurement Process



EM Mission and Priorities

“Complete the safe cleanup of the environmental legacy brought about from five decades of nuclear weapons development, production, and Government-sponsored nuclear energy research.”



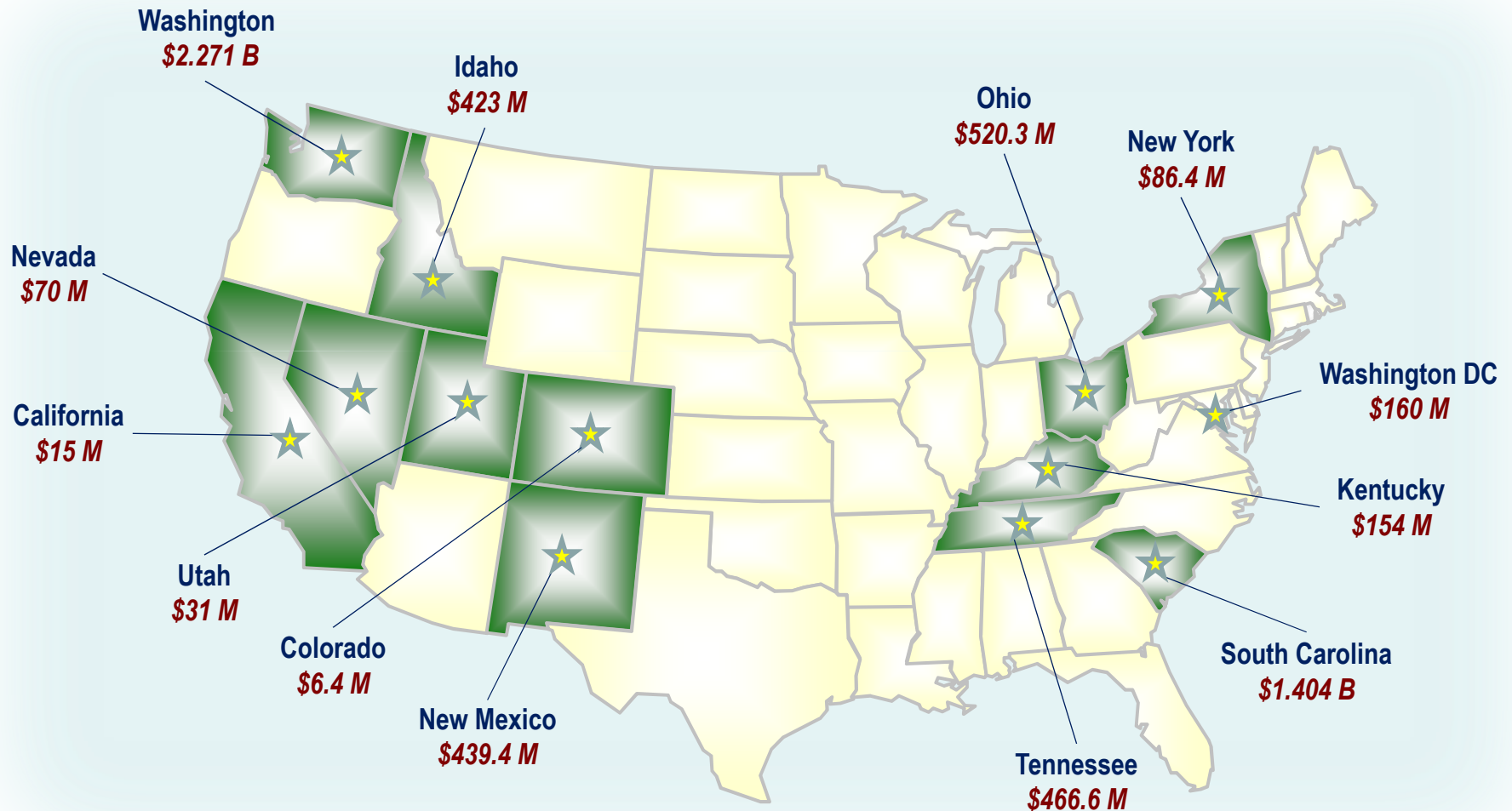
- Activities to maintain a safe, secure, and compliant posture in the EM complex
- Radioactive tank waste stabilization, treatment, and disposal
- Spent nuclear fuel storage, receipt, and disposition
- Special nuclear material consolidation, processing, and disposition
- High priority groundwater remediation
- Transuranic and mixed/low-level waste disposition
- Soil and groundwater remediation
- Excess facilities deactivation and decommissioning (D&D)



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FY 2011 Congressional Request by State



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FY 2011 Budget Request Highlights

- **Funds tank waste management and treatment activities across the complex**
 - Hanford Waste Treatment and Immobilization Plant (\$740M)
 - to accelerate completion of design
 - Savannah River Salt Waste Processing Facility (\$288M)
 - construction and pre-operations
 - Idaho Sodium Bearing Waste Treatment (\$6.5M)
 - to complete construction activities
 - Tank waste retrievals at Hanford and Savannah River (\$95M)
 - to meet regulatory commitments
- **Increased funding at Portsmouth to support accelerated D&D**



FY 2011 Budget Request Highlights

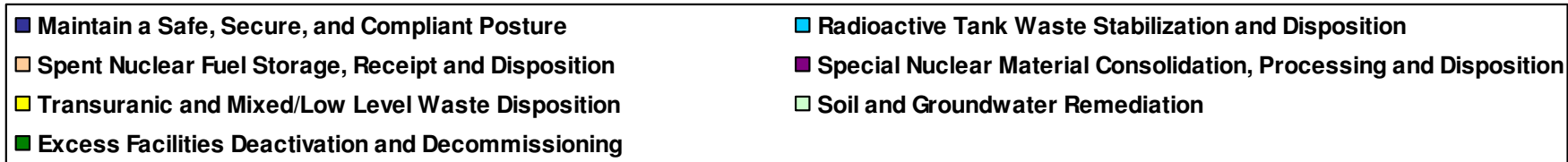
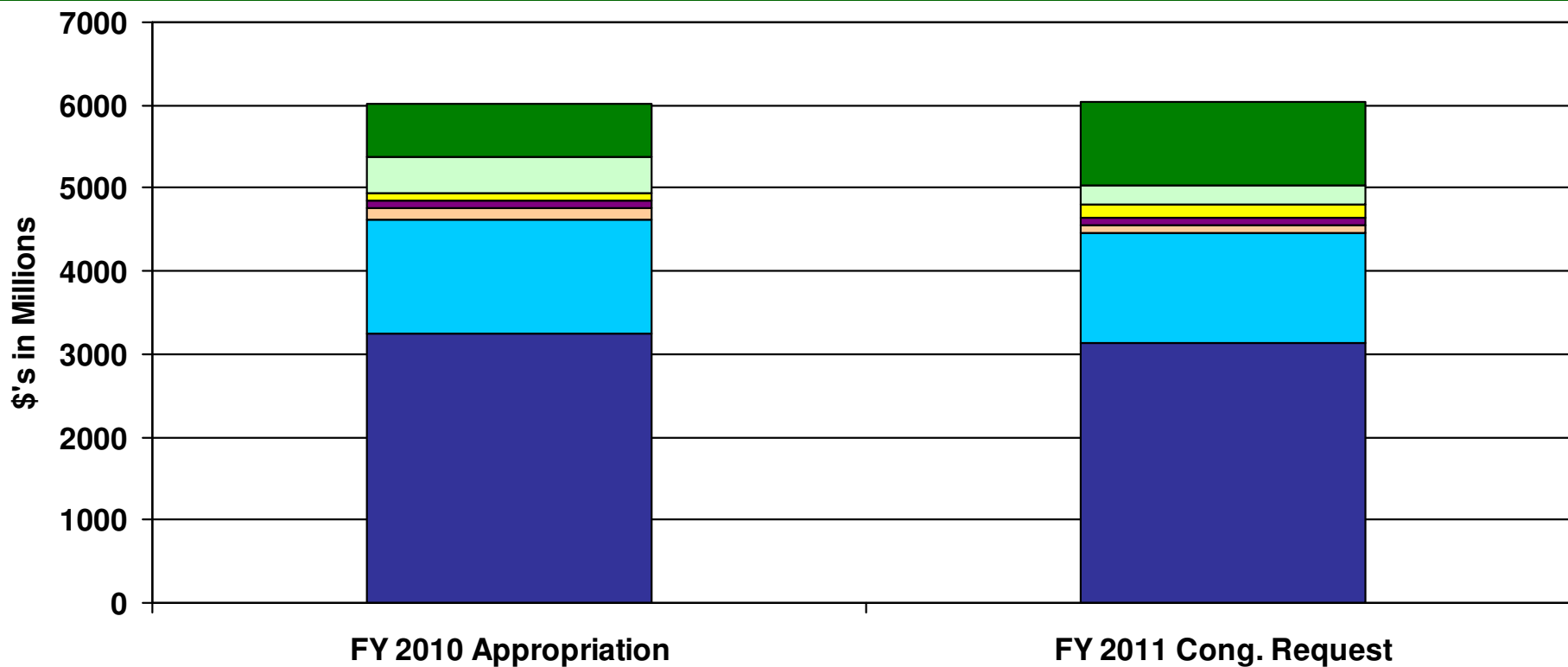
- **Increased technology investments**
 - Tank Waste Technologies (\$60M)
 - Optimize tank waste disposition resulting in technology insertion points into the tank waste system that will yield significant cost savings and reduce the period of execution
 - Groundwater Remediation (\$25M)
 - Understand and quantify the subsurface flow and contaminant transport behavior in complex geological systems
- **Small site completions**
 - Brookhaven National Laboratory (\$13.8M)
 - Stanford Linear Accelerator (\$3.5M)
 - Separations Process Research Unit (\$12.5M)
 - General Electric Vallecitos Nuclear Center (less than \$100k)



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Funding by Program Area



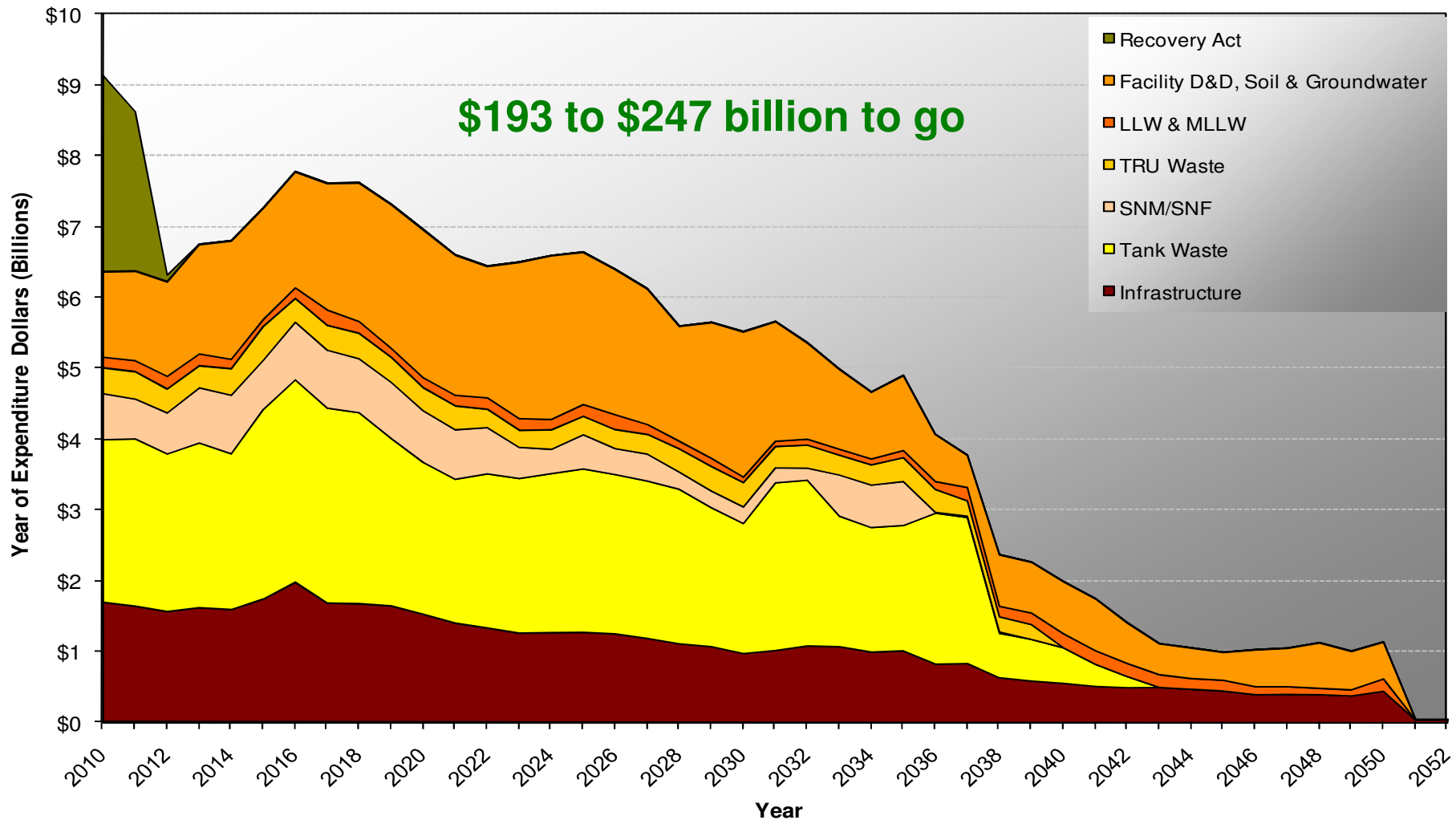
Strategic Investment of Recovery Act Funds

- Recovery Act accomplishments
 - **Drives EM footprint reduction**
 - 40% by September 2011; ~900 square miles to ~540 square miles
 - Removal of 2 million tons of mill tailings at the Moab site
 - Accelerate disposition of legacy transuranic waste inventories at 11 sites from 2022 to 2015
 - Build out of infrastructure needed to support waste processing operations once construction complete (\$200M SRS; \$326M RL)
- Acceleration of 3 small site completions to FY 2011
 - Brookhaven National Laboratory
 - Stanford Linear Accelerator
 - Separations Process Research Unit



Life-cycle Cost Profile

Environmental Management Program Costs by Program Area



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Strategic Focus

Footprint Reduction

- Complete legacy cleanup at non EM sites
 - Shrink geographic cleanup area at EM sites
 - Reduce surveillance and maintenance costs and infrastructure needs

Tank Waste

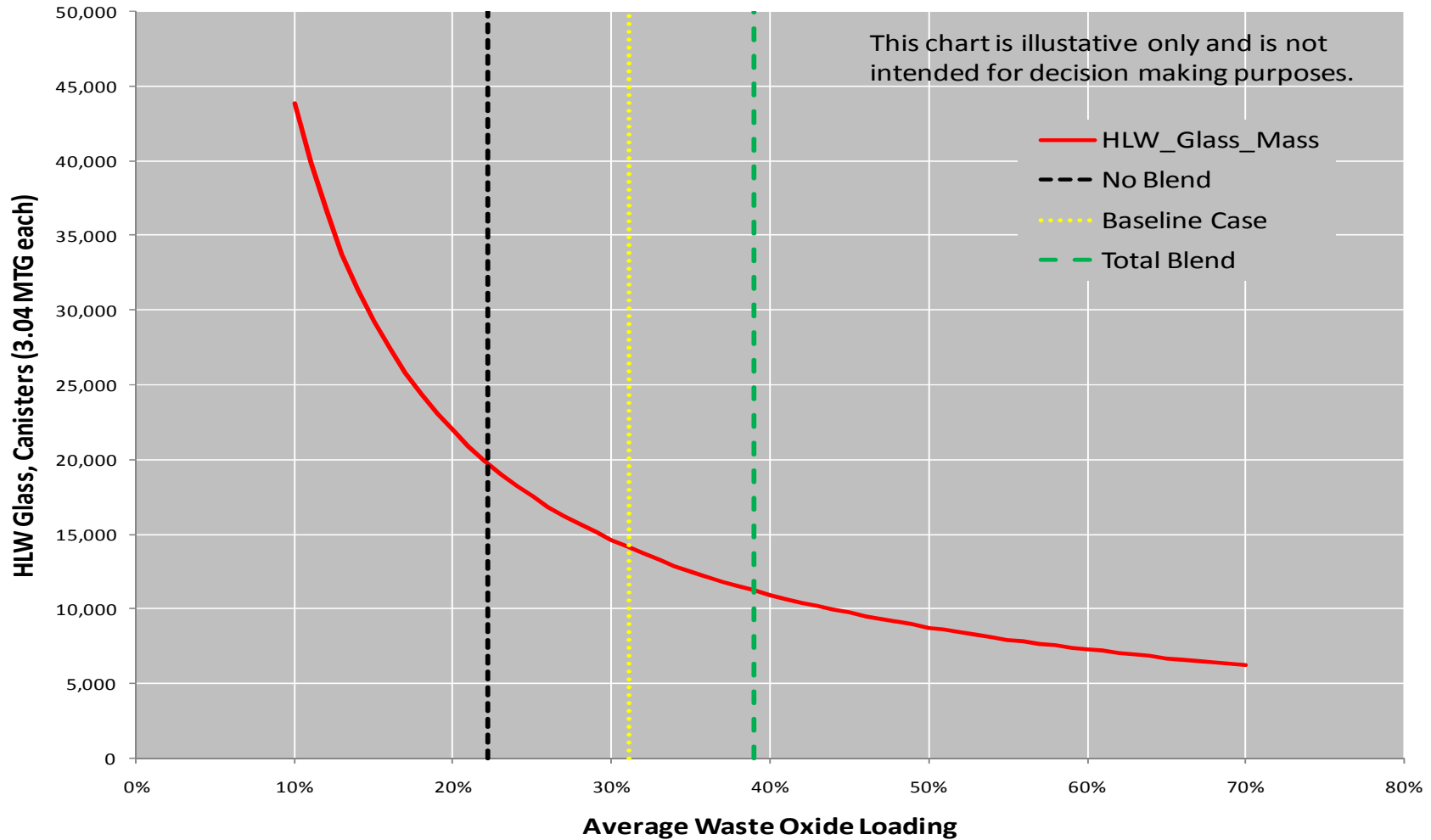
- Focus on Innovative Technologies
 - Determine technology insertion points
 - Deploy at tank treatment technologies
 - Deploy technology for waste forms that can be generated at much lower cost than glass and are fully protective
- Accelerated Tank Retrieval and Waste Staging activities to demonstrate success

Core EM Mission Areas

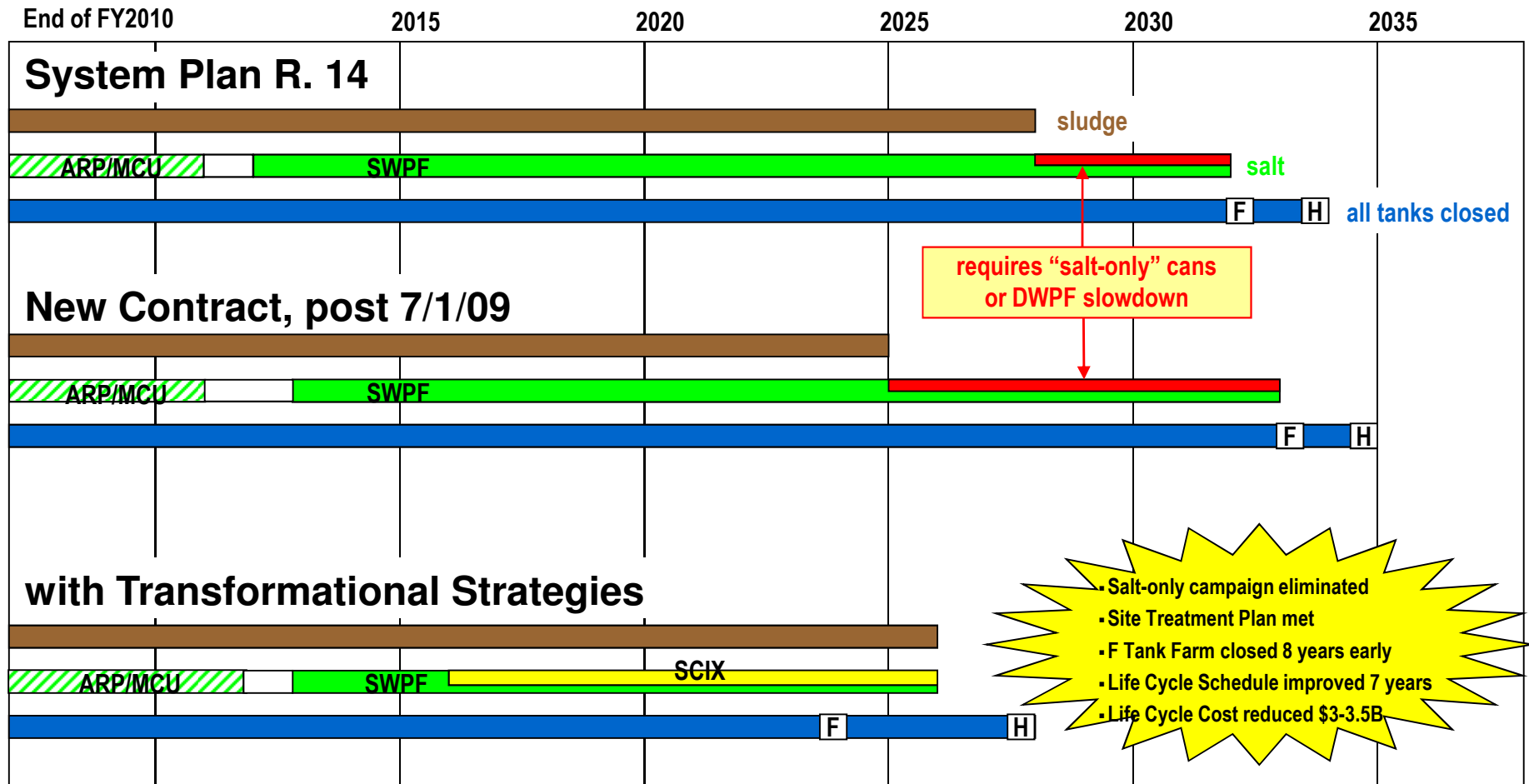
- “Mission Shifts” — timing of the return of strategic assets from EM to operating programs
- Utilization of the Departmental assets once cleanup is completed



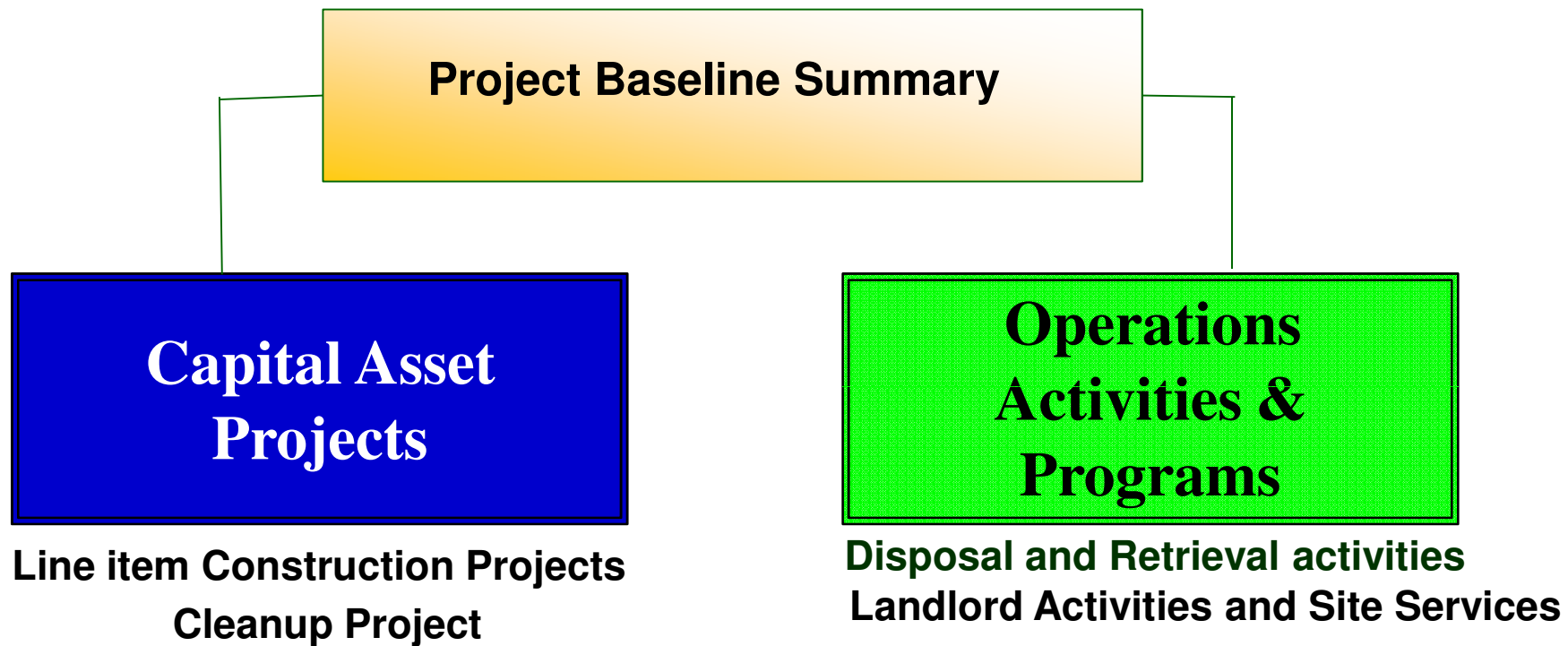
Impacts of Tank Waste Loading on Canister Counts



Increased Salt Waste Processing



EM's New Project Structure

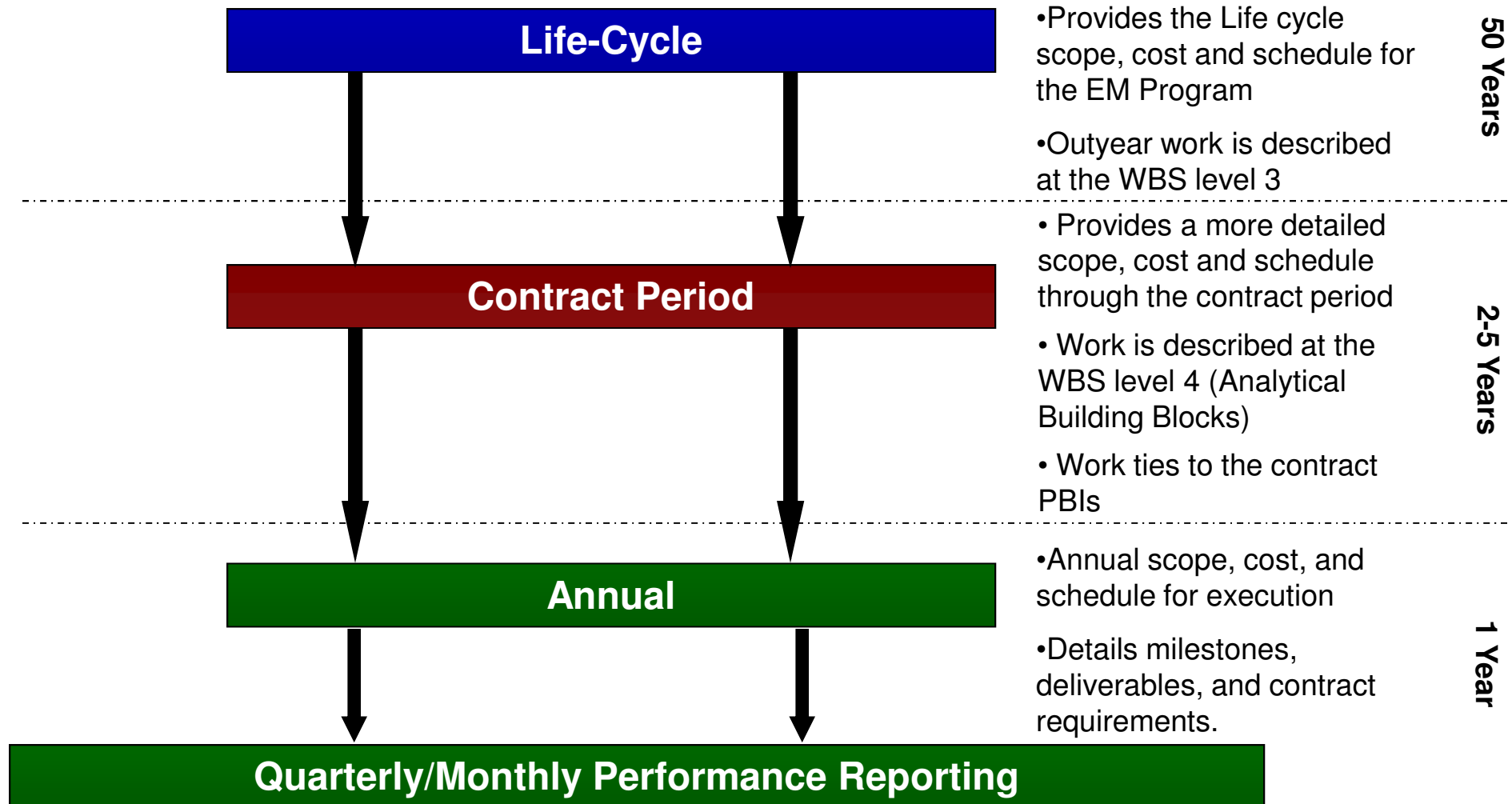


Project Portfolio Restructure

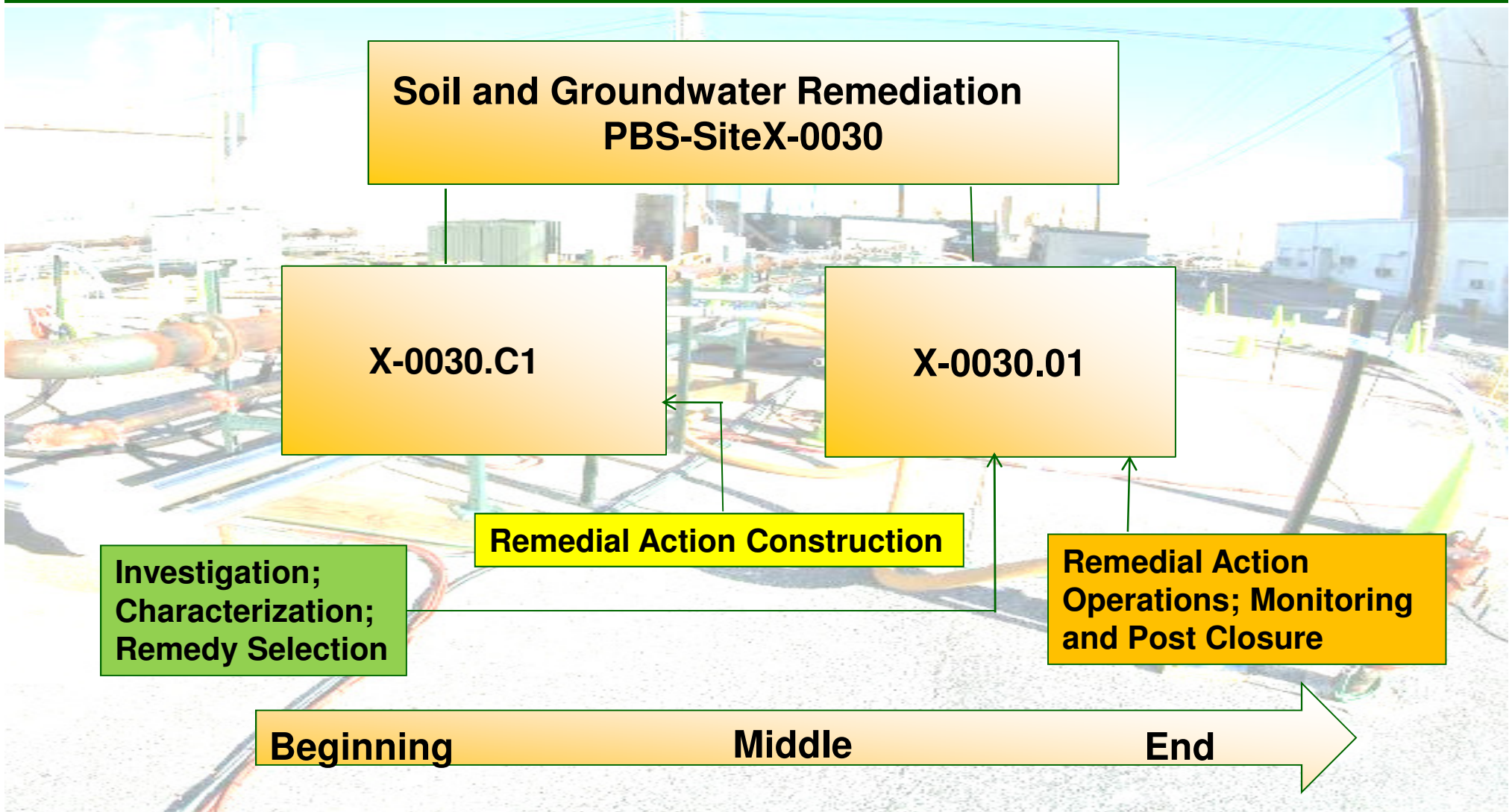
- Restructure PBS to differentiate construction and cleanup asset projects from operating programs and activities
 - Develop manageable sub-projects using Analytical Building Blocks and Work Breakdown Structure
 - Maintain configuration control of lifecycle scope and cost
- Capital Assets Projects
 - Apply DOE O 413.3A requirements
 - Report in PARS
 - Deliver project completions
- Operations Activities
 - General projects
 - Not reported in PARS
 - Incorporate performance metrics into contracts and use measures to monitor progress



Operations Activities and Programs



PBS with Capital and Operations Components



Operations Activities and Programs

Life Cycle Metrics (Corporate)

Contract Metrics

Tank Waste

Liquid Waste
Eliminated

✓ Retrieve C-Farm Sludge (Kgal)

C-101: 88
C-102: 316
C-103: 2
C-104: 259
C-105: 132
C-106: 3
C-107: 247
C-108: 7
C-109: 718
C-110: 177
C-111: 57
C-112: 104

Gallons of
waste retrieved
C-104—259 Gallons

Tanks Closed

- ✓ C-Farm Retrievals Complete: (9/2014)
- ✓ C-Farm Closed 2019

SST ready for closure -1



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Procurement and Contract Management Initiative

- **Purpose:** Identify meaningful, impactful, and measureable reform, to improve the way contracts are selected and administered.
- **Approach:**
 - EM-wide survey to key Federal and contractor staff to identify specific contract management issues and barriers
 - Two targeted workshops completed: one for key contract executives (March 3) and one for key EM contract managers (March 4)
- **Major Findings:**
 1. RFPs are not strategic decision-making tools.
 2. Lack of consistency across the complex; each RFP is a singular event.
 3. Adversarial relationships across both sides of the fence.
 4. The “Danger-Zone”, contract true-up, requires major reform



Consensus Recommendations and Next Steps

- In collaboration with industry; streamline, standardize, and inculcate across the EM community a streamlined RFP process.
- Develop guidelines for “partnering” (as opposed to “partnerships”) with industry for mutual success.
- Revisit, revamp and clarify the true-up phase of the post-award process.



Summary

- Capitalize on legacy cleanup completions and footprint reduction
 - Re-investment target into programmatic activities that offer the greatest return on investment by reducing in life-cycle cost and period of execution
 - Continue to leverage Recovery Funds in FY 2010 and FY 2011
- Strategic investments needed in tank waste system to ensure long-term success of cleanup program
 - Pre-treatment
 - Advanced Waste forms
 - Retrievals and Closure
- Complete project portfolio restructuring
- Streamline acquisition process
 - Align projects and contracts

