

Savannah River Remediation

Human Performance Challenges & Initiatives



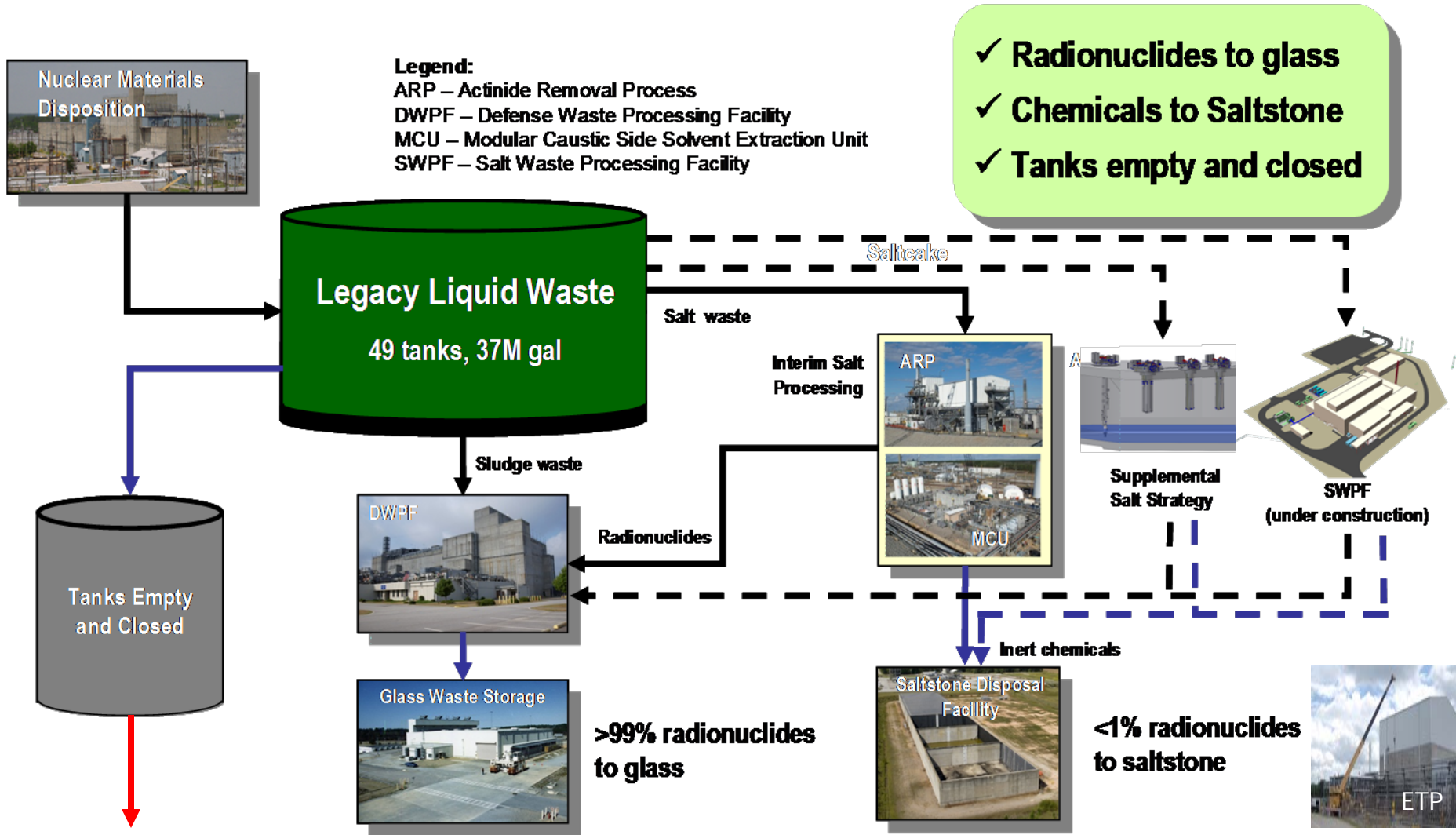
Dave Olson
Operations and Deputy Project Manager

February 28, 2011

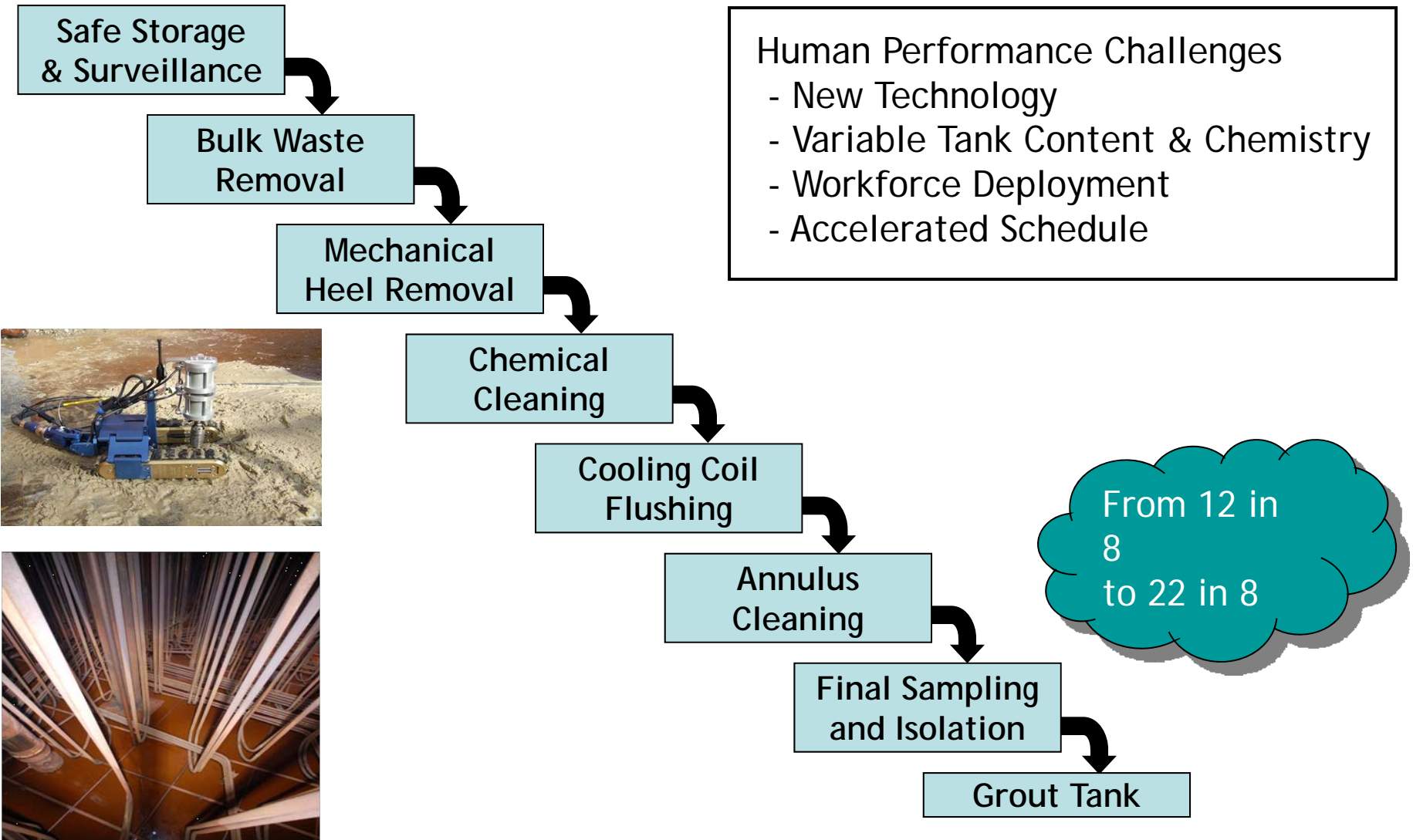
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Site Phone 803-208-3205

A Complex Integrated High Hazard Scope



Tank Closure Acceleration



We do the right thing.

800 New
Employees
Permanent &
Subcontractors

New Technologies

Modified Work
Practices

New Policies



New
Business
Systems

Multiple
Site-Level
Interfaces

New
Contract

ARRA
Scope

New
Organizational
Structures

Aggressive Contract Commitments

Changing
Requirements



Error Precursors - How many were present for SRR? '✓✓'




Task Demands	Individual Capabilities
• Time pressure (in a hurry) ✓	• Unfamiliarity w/ task / First time ✓
• High Workload (memory requirements) ✓	• Lack of knowledge (mental model) ✓
• Simultaneous, multiple tasks ✓	• New technique not used before ✓
• Repetitive actions, monotonous	• Imprecise communication habits ✓
• Irrecoverable acts ✓	• Lack of proficiency / Inexperience ✓
• Interpretation requirements ✓	• Indistinct problem-solving skills ✓
• Unclear goals, roles, & responsibilities ✓	• "Hazardous" attitude for critical task ✓
• Lack of or unclear standards ✓	• Illness / Fatigue ✓
Work Environment	Human Nature
• Distractions / Interruptions ✓	• Stress (limits attention) ✓
• Changes / Departures from routine ✓	• Habit patterns
• Confusing displays or controls	• Assumptions (inaccurate mental picture) ✓
• Workarounds / OOS instruments	• Complacency / Overconfidence ✓
• Hidden system response ✓	• Mindset ("tuned" to see)
• Unexpected equipment conditions ✓	• Inaccurate risk perception (Pollyanna) ✓
• Lack of alternative indication	• Mental shortcuts (biases)
• Personality conflicts ✓	• Limited short-term memory

- Implement Improved Defenses
- Focus on Error Reductions Tools
- Identify and Overcome Organizational Weakness

- Automatic Value Position Controls
- Electronic Waste Characterization System
- Management Control Plan
- Leading Indicators
- Management Field Observation (MFO)
- Bench-marking



- Electronic Material Balance 
- Verifying and checking engineering documents (checklists) 
- Checklist for Fire Hazard Analyses
- Environmental Review Checklist

- Control Room Consolidation 
 - Consolidates 9 control rooms using state of the art distributed control systems (DCS)
- Executive Safety and Quality Board (ESQB)
- Corrective Action Review Boards (CARB's)
- Edventures Training
- Earned Valued Management System (EVMS) 
- Compass 

We do the right thing.

9th VPP Star of Excellence Award

3rd VPP Legacy of Stars Award

More than Two Million Hours
without a lost day of work due to injury

Lowest TRC
rate in
over 25 years

No Adverse
Trends or
Programmatic
Issues

No Watch list
Items or
recurring
issues

Lowest
ConOps
ORPS rate
in 10 years

Only one
ORPS
reportable
radiological
events

Construction
workers without an
injury requiring a day
away from work -
23.2 million hours

0 Reportable Spills

0 Notice of Violations

DOE-HQ Team
validated SRR's
ISMS in July 2010

