

CH2MHILL®



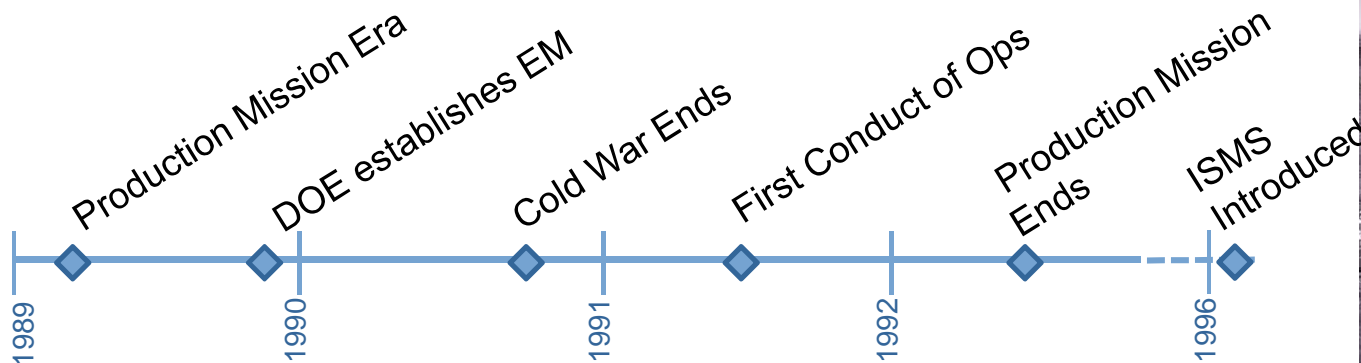
March 2 – March 6, 2014 ♦ Phoenix, Arizona

***More than two Decades of Partnering
for Improvement in
Decommissioning, Environmental
Remediation and Safety***

John Lehew *Senior Vice President, CH2M HILL Environment and Nuclear Market*
Plenary Session, Monday 3 March 2014

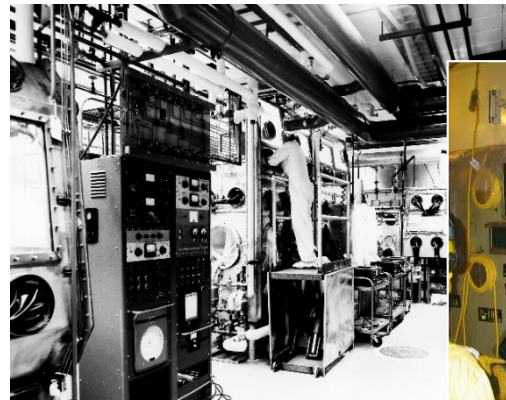
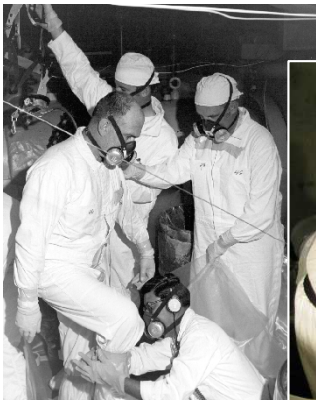
Shift from Operations to Environmental Management

- Weapons complex undergoing programmatic shift in early 1990s
 - Shift from production to decommissioning
 - DOE Office of Environmental Restoration and Waste Management established
 - Initiated Conduct of Operations - DOE Order 5480.19 to improve disciplined operations and safety

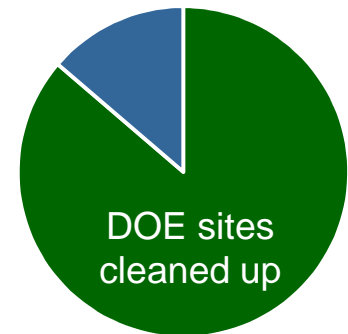
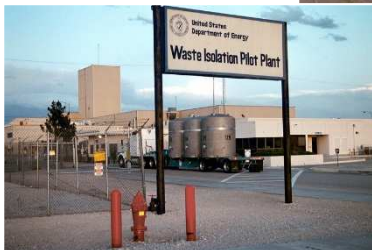
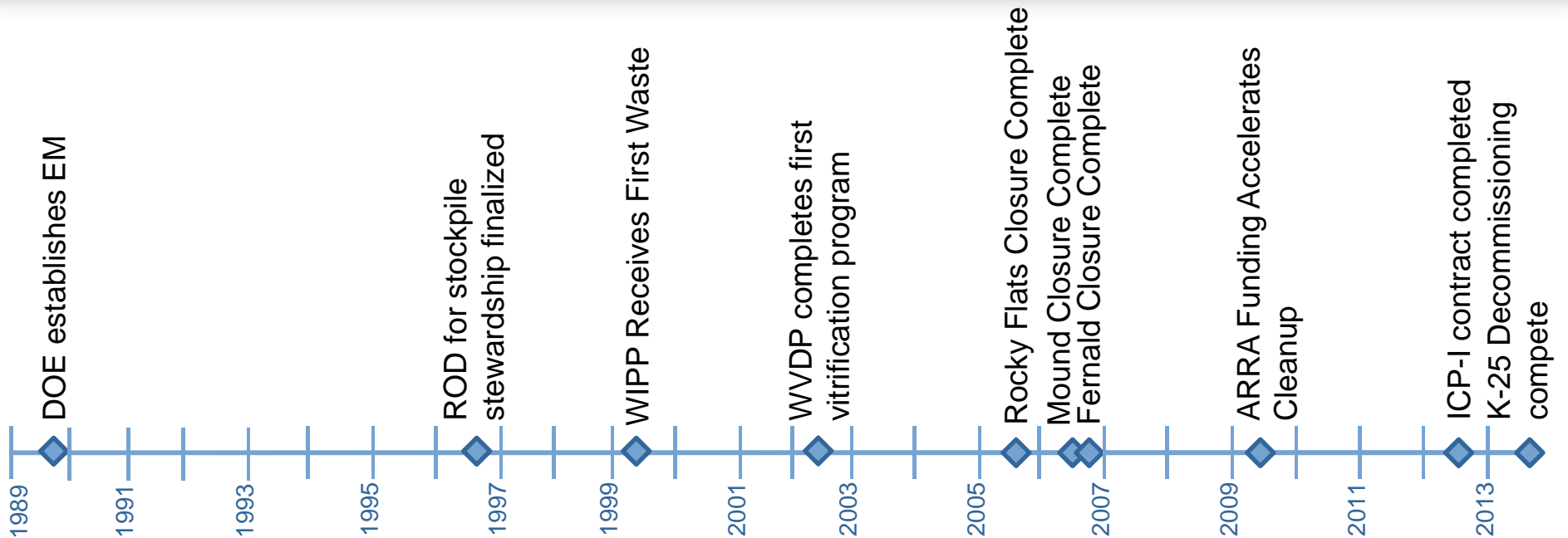


Evolution of Safety Culture

- ISMS implemented in 1996 as an enduring framework for performing work in a safe and environmentally sound manner
- In 2004, DOE revamped ISMS to make it more complete, consistent, and usable to achieve measurable results
 - Shift from a target of compliance toward one of continuous improvement and excellence



Significant Events in DOE-EM History

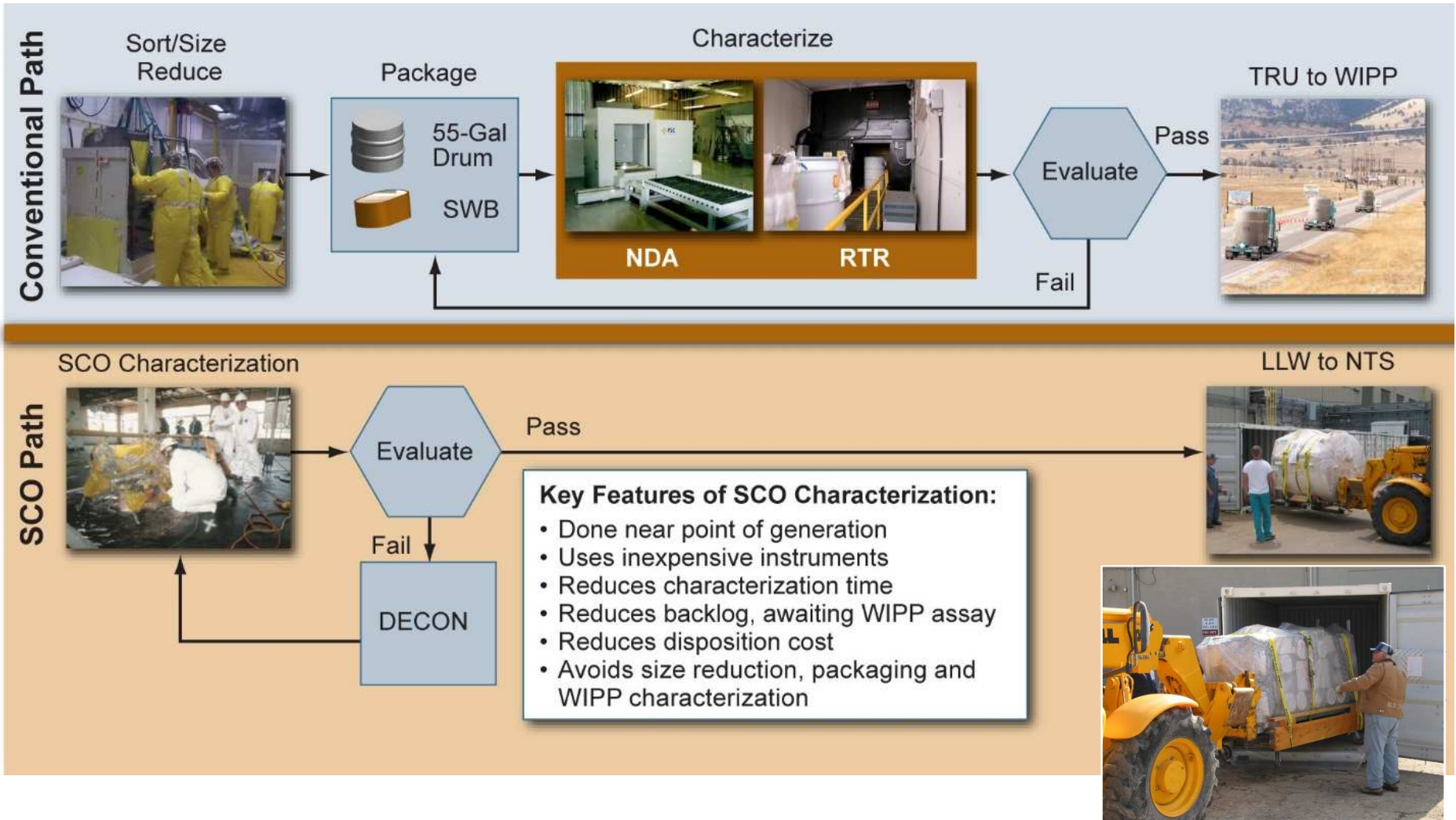


D&D Improvements and Innovations

- Size reduction
 - Started as size reduction with higher cost and worker risk with more packaging/more waste
 - Moved to better techniques, less size reduction and packaging – larger components

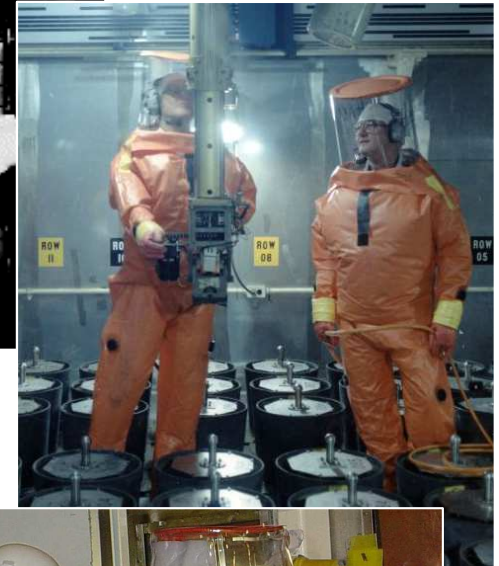


Evolution of TRU Waste to SCO Waste



Evolution of Personal Protective Equipment (PPE)

- Enhancements in PPE and containment systems goes hand in hand with productivity through safety
 - APRs to PAPRs
 - Improved supplied air suits
 - Use of enclosures and bag-out systems



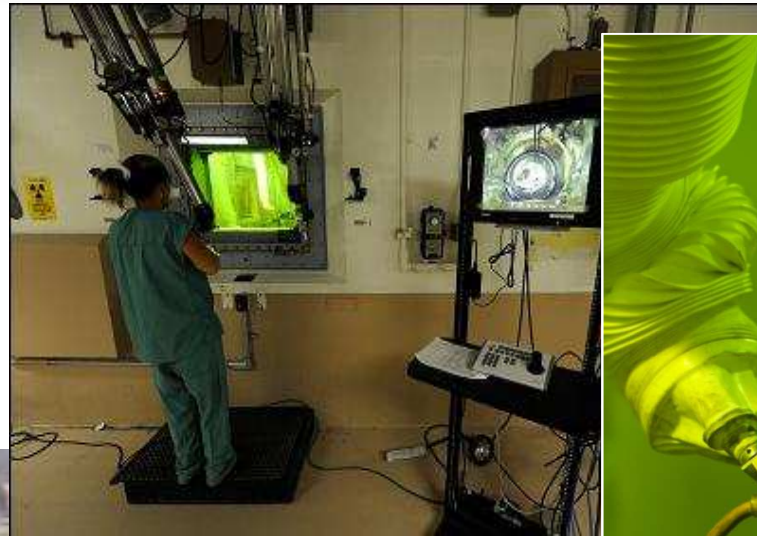
D&D Improvements and Innovations

- Innovative disposal methods reduce size reduction and handling
 - Grouting and encapsulation of large packages, i.e. vaults and reactors
 - Polyurea coating becomes shipping container for low-level waste



D&D Improvements and Innovations

- Remotely operated equipment
 - Remotely operated equipment moves the worker further away from the hazard, improves ALARA, and mitigates risk of unknown hazards



Partnering for Results

- Today's performance has been the result of >20 years of partnering between DOE, contractors, regulators and the workforce
 - Collaboration for advancing the best practices and safe decommissioning and environmental remediation
 - Continuous workforce engagement/involvement
 - Frequent customer/regulator interface
 - Complex-wide sharing of lessons learned
 - Complex-wide working groups
 - Complex-wide safety metrics



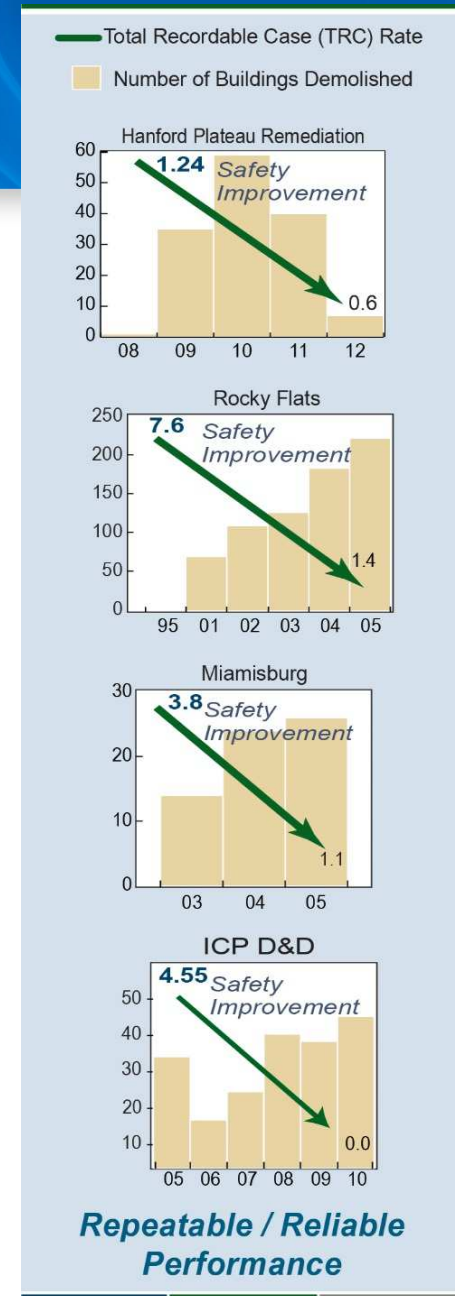
Complex-Wide Benefits

- Today we have a very strong safety culture underpinned by leadership, partnership, and empowerment
- Employee-based safety initiatives facilitate employee ownership, involvement, and continuous improvement
- Line management accountability



The Complex Today

- Continuing to challenge safety performance
- Continuous improvement in cleanup approaches and waste management practices
- Safety improvement tied to improvement in performance
- Still a lot of cleanup work to do



CH2MHILL®