



Fukushima Environmental Remediation



Kurt Kehler
Vice President Decommissioning and Demolition

Waste Management
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The Path Forward

- Model Technology Projects complete
 - Basic decontamination approaches
 - No magic - hard work
- Communities conducting cleanup
- Consistent approaches a concern
 - Minimize waste quantity
 - Minimize waste handling
 - Decontamination by media type
 - Avoiding cross contamination
 - Measurement and verification
 - Data management
- General public distrust
 - Cleanup worker shortage
 - Public concern about returning



Loading waste into railcars for transport

Applicable International Lessons Learned

	Hanford Plateau Remediation	Hanford River Corridor	Idaho Cleanup Project	Savannah River Decommissioning	Rocky Flats Closure Project	Miamisburg Closure Project	West Valley Demonstration Project	Oak Ridge ETPP	Dounreay Decommissioning
Decontamination	●	●	●	●	●	●	●	●	●
Demolition	●	●	●	●	●	●	●	●	●
Reactor Decommissioning	●	●	●						●
Spent Fuel Retrieval and Storage	●		●						●
High Level Sludge (Fuel Sludge) Retrieval, Treatment and Storage	●		●						●
Soil Remediation	●	●	●	●	●	●	●	●	
Ground Water Treatment	●	●	●	●	●	●	●	●	
Low Level Waste Treatment and Storage	●	●	●	●	●	●	●	●	●
Intermediate Level Waste Treatment and Storage	●	●	●	●	●	●	●	●	●
High Level Waste Treatment and Storage	●		●	●	●	●	●		●

A Logistics Problem – Not Just Technology

- Exclusion zone decontamination - not technology dependent
 - Simple techniques
 - Consistent with international lessons learned
- Characterization & Waste Management
 - Cornerstone issues
- Public out reach – full time job
 - Stakeholder relations
 - Education
 - Visibility
 - Trust
- Data Management
 - Automation
 - Pre & post data collection
 - Quality Assurance

EPA residential area remediation



An Approach and Technical Problem

- Reactor decommissioning
 - Remote technology
 - Characterization
- Approach
 - Methodology just as important



- Begin with the end in mind
 - Unnecessary efforts
 - Work to keep it simple