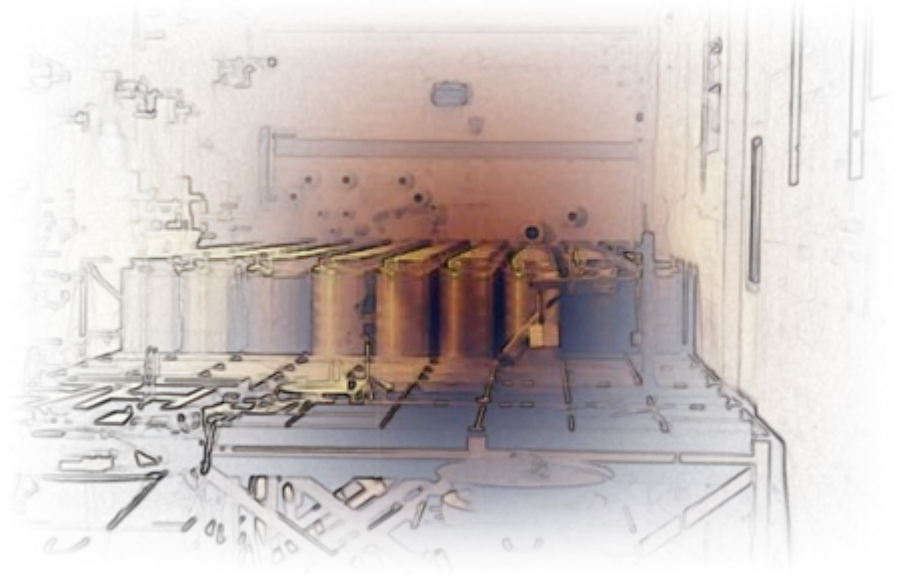


US Department of Energy Storage of Spent Fuel and High Level Waste

***Presented at PATRAM
London, UK - October 2010***

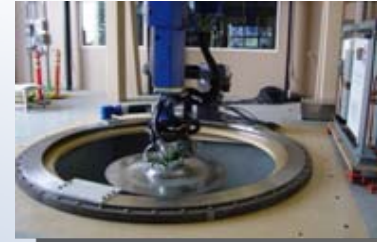
Sandra M Birk
Idaho National Laboratory



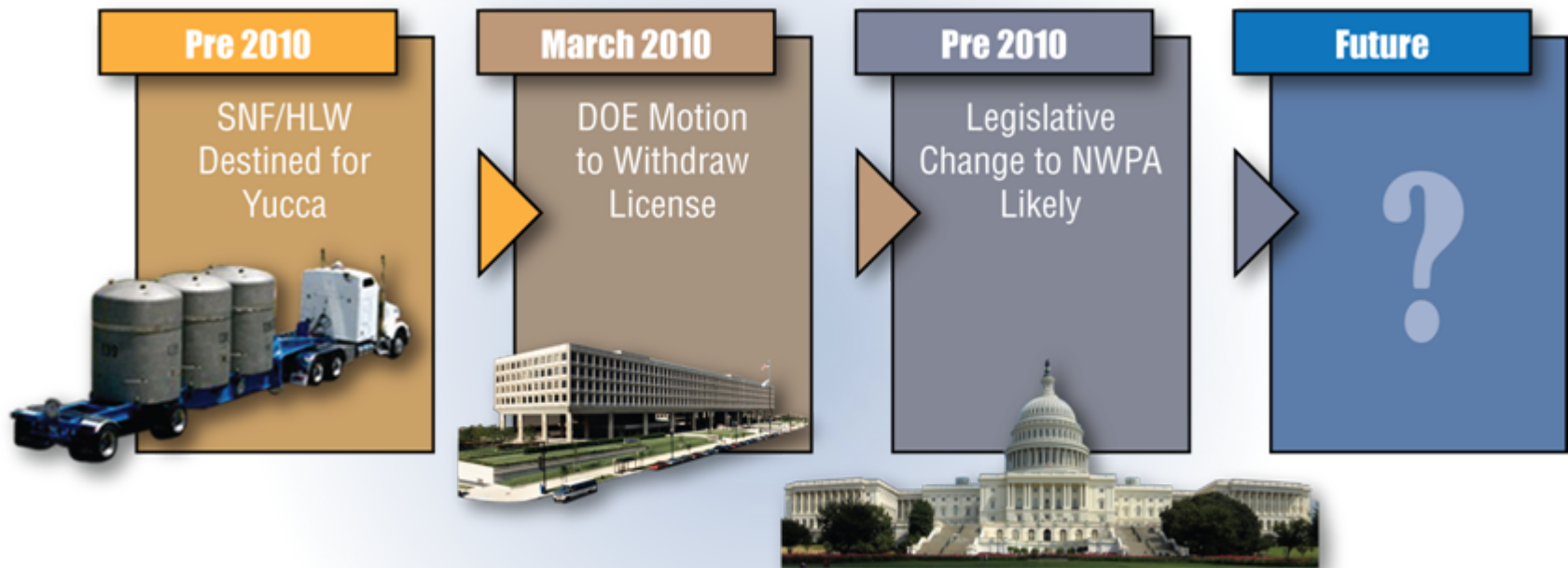
www.inl.gov

Overview

- History and Approach
- Site Approaches
- Research and Development
- Considerations
- Conclusion



History and Approach



Idaho SNF Storage Facilities



Idaho SNF Storage Facilities



Hanford SNF Storage Facilities



Savannah River SNF Storage Facility



DOE HLW Storage

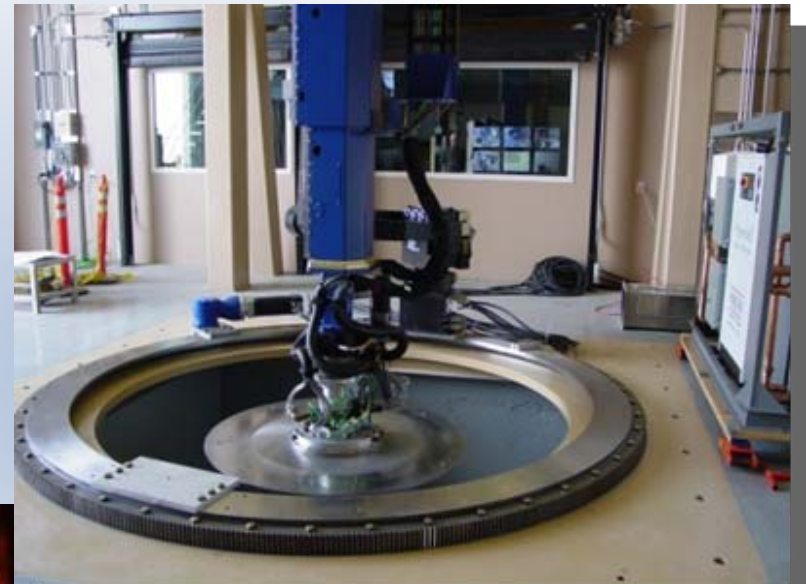


DOE HLW Storage



Research and Development

- Standard Canister
- Melter Technology
- Neutron Poison
- Retrieval and Stabilization
- Remote Canister Closure
- Industry Participation



Considerations

- What data will be used to defend storage beyond 120 years?
- What improves stakeholder confidence in DOE's storage?
- What factors do or do not justify early packaging?
- Should land disposal regulations be applied to HLW waste forms destined for a repository?
- Given long construction lead time, how will DOE determine facility replacement is necessary?
- Is further consolidation necessary?
- Will alternative disposal options present significantly different requirements for packaging than those from Yucca Mountain?

Conclusion

- No technological barriers to extended storage
- Active management allows extended storage and time for R&D to improve systems
- Integration with other efforts will contribute to more achievable success
- DOE does not assume storage is forever
- Existing cash flow and total liability must be considered
- Unless public accepts storage as an end state, a repository is needed