

Regulatory Program Review for Extended Storage and Transportation

***Storage and Transportation Subcommittee
Blue Ribbon Panel for America's Nuclear Future
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Overview

- **Mission and Regulatory Framework**
- **Extended Storage and Transportation Program Review**



NRC Mission

- **Protect public health and safety**
- **Promote the common defense and security**
- **Protect the Environment**



Regulatory Framework

- **Storage and Transportation Licensing**
- **Safety Standards**
 - Criticality
 - Shielding
 - Containment
 - Fuel Integrity
- **Safety Demonstration**
 - Engineering Analyses
 - Fabrication Inspection
 - Operational Monitoring



Storage License Rulemaking

- **Extension to 40-year License Periods**
- **Aging Management Plan**
 - Time-Limited Aging Analyses
 - Monitoring and Inspection
 - Maintenance and Mitigation
- **Technical Bases**
 - Cask Research Program
 - Knowledge of Aging Phenomena
 - Aging Management



Commission Direction ***(SRM-COMDEK-09-0001)***

- **Undertake a thorough review of spent fuel storage and transport regulatory programs**
 - Adequacy for ensuring safe and secure storage and transportation for extended periods beyond 120 years
 - Research to bolster technical bases of NRC framework
 - Risk-informed and performance-based enhancements
 - State-of-the-art technology incentives
 - Comparing and harmonizing international standards
 - Stakeholder participation and collaboration



Project Plan

(COMSECY-10-0007)

- **Regulatory Process Improvements**
 - Licensing
 - Inspection and Enforcement
- **Extended Storage and Transportation**
 - Safety
 - Security
 - Environment

<http://www.nrc.gov/reading-rm/doc-collections/commission/comm-secy/2010/>



Aging Research

- **Phased Approach**
 - Identify and rank phenomena/issues
 - Conduct additional research and analyses
 - Participate in external research programs
 - Implement regulatory enhancements (if needed)
- **Potential Technical Challenges**
 - Uncertainties in data and analyses
 - New design features and monitoring methods for extended periods



Summary

- **Project plan provided to Commission for further consideration**
- **Gap assessments and research activities have started**
- **Stakeholders will have a participative role in enhancement of the regulatory programs**