



NMSS Programs, Performance, and Future Plans and Integrated Strategy on Spent Fuel Management

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AGENDA

- Program Overview
- Managing a Dynamic Program
- Licensing and Oversight of Fuel Cycle Facilities
- Enhancing Safeguards and Non-Proliferation
- Integrated Plan on Spent Fuel Management
- Conclusion

Program Overview

- Major Programs
 - Maintaining safety & security of operating facilities
 - Licensing and oversight of new fuel facilities
 - Licensing and oversight of spent fuel storage and RAM transportation
 - Managing the high level waste program

Program Overview

- Near-Term Policy Issues/Commission Interactions
 - Revising the fuel cycle oversight process
 - Revisiting the Paradigm of Spent Fuel Storage and Transportation
 - Integrated Plan for Spent Fuel Management framework

Program Overview

- Challenges
 - Stabilize the regulatory program for high level waste disposal
 - Launch the Integrated Plan for spent fuel management
 - Integrate concurrent regulatory activities

Managing a Dynamic Program

Timothy Pulliam, Director
Division of Planning Budget and
Program Analysis

Managing a Dynamic Program

- Knowledge Management
- Outreach activities
 - Enhancing outreach to domestic and international stakeholders
- Work-Life balance

Licensing of Fuel Cycle Facilities and Enhancing Safeguards and Non-Proliferation

Marissa Bailey, Deputy Director
Division of Fuel Cycle Safety and
Safeguards

Licensing of Fuel Cycle Facilities

- Successes
 - All metrics met or exceeded with heavy caseload
 - License renewal
 - LES pre-operations caseload
 - New applications
 - MOX Fuel Fabrication Facility

Licensing of Fuel Cycle Facilities

- Challenges/Potential Policy Issues
 - Develop new processes for R&D, medical isotope production
 - Address ISA Implementation Challenges

Licensing of Fuel Cycle Facilities

- Continuous improvement
 - Lean Six Sigma
 - Staff Qualification Standards
 - Updated guidance to reviewers

Enhancing Safeguards and Non-Proliferation

- Agency Roles
- Recent Activities
- Challenges

Integrated Plan on Spent Fuel Management

Lawrence Kokajko, Director
Division of High Level Waste
Repository Safety

Integrated Plan on Spent Fuel Management

- The objective is to enhance efficiency and effectiveness for regulation of the back-end of the fuel cycle (safety, security, and environmental protection)

Integrated Plan on Spent Fuel Management

- Overview of the strategy
 - Regulatory and analytical tools for high level waste disposal
 - Regulatory framework for reprocessing
 - Extended storage and transportation of spent fuel

Regulatory and Analytical Tools for Waste Disposal

- Challenges/Potential Policy issues
 - Adjusting our regulatory programs to prepare for the future
 - Ensuring the versatility of our technical tools and regulatory program to encompass an array of different high level waste disposal alternatives

Regulatory and Analytical Tools for Waste Disposal

- Path forward
 - Development of regulatory gap analysis for waste disposal
 - Development of flexible performance assessment tool

Regulatory Framework for Reprocessing

- Challenges/Potential Policy Issues
 - Coordinate framework schedule
 - Resolve complex technical and policy issues

Regulatory Framework for Reprocessing

- Path forward
 - Develop regulatory basis to support rulemaking
 - Initiate environmental work

Revisiting the Paradigm of Spent Nuclear Fuel

- Extended Storage and Transportation -

Vonna Ordaz, Director
Division of Spent Fuel Storage
and Transportation

Revisiting the Paradigm

- Commission Direction
 - Review Spent Fuel Storage and Transportation Programs for periods beyond 120 years
 - Conduct research to bolster the regulatory framework

Scope of Program Review

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

Materials Aging Research

- Aging gap analysis underway
- Research on high burnup fuel (ongoing), sealed canisters and other components
- Participate in EPRI-led Long-term Cask Demonstration Program

Extended Storage and Transportation

- Challenges/Potential Policy issues
 - Rulemaking for cask certification
 - Storage and transportation integration
 - Long-Term cladding integrity
 - Financial Qualifications/Assurance

Extended Storage and Transportation

- Path Forward
 - Near-Term process improvement activities
 - EST gap assessments
 - Research and Extended Storage Collaboration Program

Conclusion

Acronyms

- EPRI – Electric Power Research Institute
- EST – Extended Storage and Transportation
- ISA – Integrated Safety Analysis
- LES – Louisiana Energy Services
- MOX – Mixed Oxide
- NMSS – Nuclear Material Safety and Safeguards
- RAM – Radioactive Material
- R&D – Research and Development