The United States of America's Presentation

Joint Convention on the Safety of Spent Fuel Management and the Safety of Radioactive Waste Management

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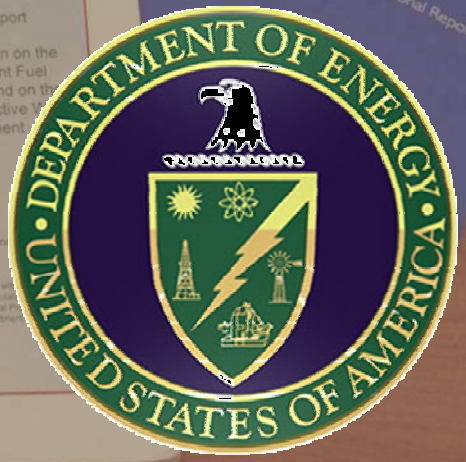
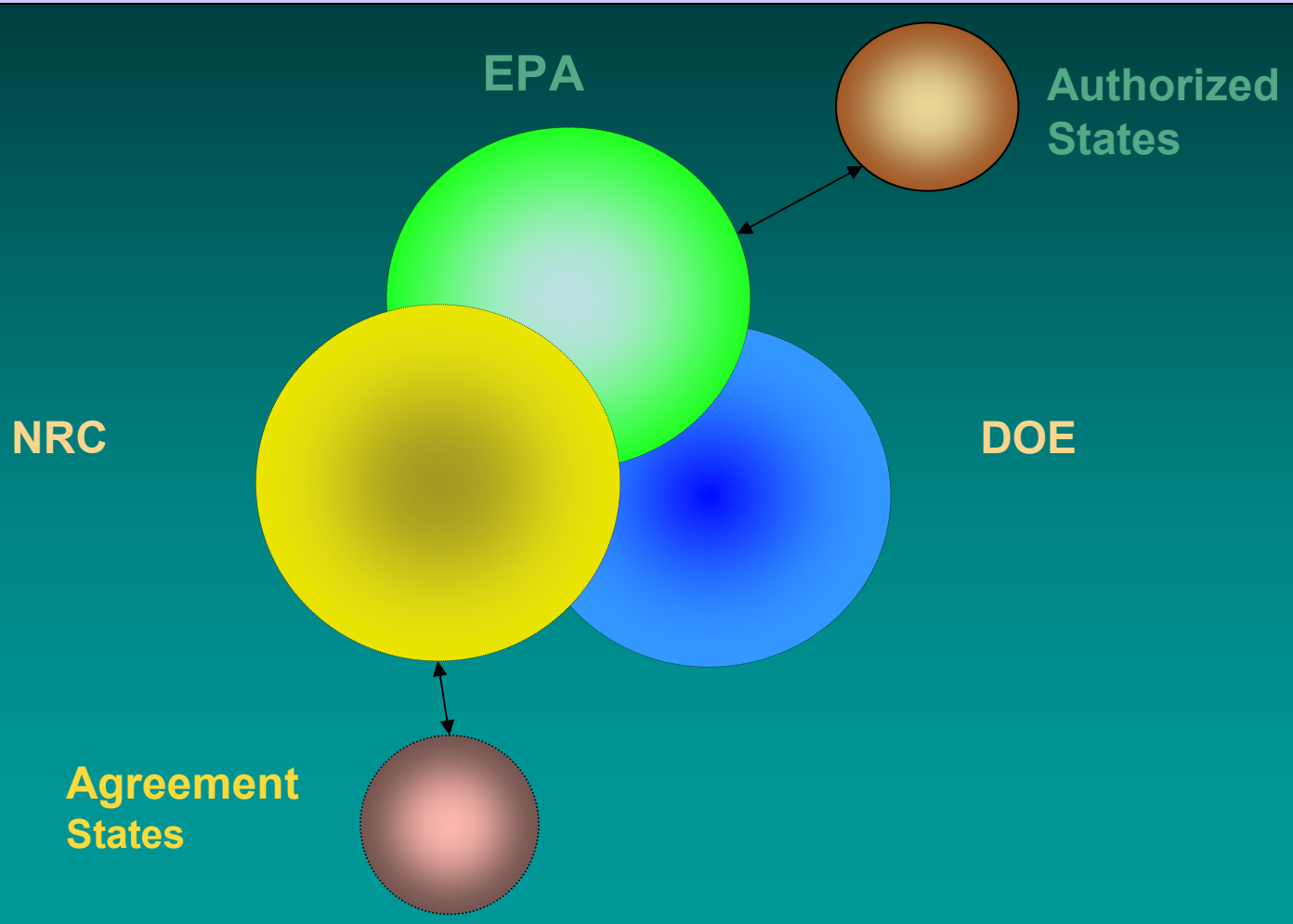


Roles & Responsibilities of U.S. Agencies



Significance of the Convention

- Consistent with U.S. Foreign Policy
- Influences development of safety programs
- Identifies additional technical and regulatory cooperation
- Makes national programs transparent
- Encourages self-assessment

Safety Achieved Through:

- Established legal and regulatory framework
- Safe operating practices
- Robust oversight and integration of lessons learned
- Defense in depth
- Prevention and mitigation of accidents
- Safety-related technical cooperation

Content of Presentation

- How the U.S. satisfies provisions of the Joint Convention
- Liability considerations (responsibilities)
- Feedback from the last review meeting
- What's new since the last report
- Safety and operational trends
- Topics raised during your review
- Summary

National Policy

- Safe, permanent geologic disposal of spent fuel & high-level radioactive waste
- Surface or subsurface disposal of low-level radioactive waste
- Ensure Long-term containment and isolation from the accessible environment

Compliance with Joint Convention Scope (Article 3)

- Spent fuel
- Radioactive waste
- NORM outside of the nuclear fuel cycle
  - Uranium mining inventories
- U.S. defense wastes excluded

Compliance – Spent Fuel

- Managed in NRC-licensed or DOE-regulated facilities
  - Commercial spent fuel stored in licensed pools or ISFSIs
  - Spent fuel from former defense reactors managed at DOE-regulated facilities
- Regulations, guidance and orders provide framework for safe practice
- Inspections, audits and surveys confirm safe practice
- Emergency preparedness and financial assurance for prompt accident response and final spent fuel disposition

Compliance – Radioactive Waste

- Managed in NRC/State-licensed and DOE-regulated facilities
- Regulations, guidance and orders provide framework for safe practice
- Facilities subject to inspections and compliance audits
- Waste disposed at environmentally acceptable sites
- Transportation consistent with IAEA regulations
- Mandated financial assurance & custodial responsibilities
- Institutional measures after closure

Compliance – Additional Safety Provisions

- Decommissioning
- Disused sealed sources
- Quality assurance
- Emergency preparedness
- Transboundary movement

Content of Presentation

- How the U.S. satisfies provisions of the Joint Convention
- Liability considerations (responsibilities)
  - Spent Fuel
    - Long-term Management
    - Funding of Liabilities (Responsibilities)
    - Current Practice
    - Planned Facilities
- Feedback from the last review meeting
- What's new since the last report
- Safety and operational trends
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Long-term Management – Spent Fuel

- Permanent disposal in a geologic repository is established U.S. policy
- Interim safe storage pending availability of an operating repository
  - Dry cask storage at Independent Spent Fuel Storage Installations (ISFSIs)

Current and Potential Independent Spent Fuel Storage Installations

Spent Fuel Storage Facilities

Sector	Type	Number of Facilities	Inventory (MTHM)
Government	Pool Storage	2	52
	Dry Cask Storage	11	2,399
	Research and Test Reactors	6	1
Commercial	University Research Reactors	30	1
	Other Research and Test Reactors	5	<1
	At-Reactor Storage Pools	99	49,000
	Independent Spent Fuel Storage Facilities (ISFSI)	42	6,200

Funding Responsibilities – Spent Fuel

- Yucca Mountain
  - Costs shared among generators (including government)
- Storage
  - Interim storage costs borne by generators

Current Practice - Peach Bottom Dry Cask Storage

Current Practice - Susquehanna Dry Cask Storage

Current Practice –
Foreign Research Reactor Fuel Return Program

6 shipments to INL

1 South Korea
2 Romania, Slovenia, Italy & Germany
3 United Kingdom
4 Germany
5 Japan
6 Indonesia

27 shipments to SRS

1 Sweden, Switzerland, Germany, Colombia & Chile
2 Canada
3 Germany, Switzerland, Spain & Italy
4 Japan, Sweden, Germany, & Spain
5 Denmark, Italy, Germany, Sweden, & Greece
6 Australia
7 Venezuela, Uruguay, Japan, Sweden, & Spain
8 Germany, Denmark, and Sweden
9 Thailand, Philippines, Indonesia, & Taiwan
10 Portugal and Denmark
11 Japan (via Europe)
12 Brazil and Venezuela
13 Canada
14 Italy and Germany
15 Japan
16 Chile and Argentina
17 Austria, Germany, & Netherlands
18 Germany, Sweden, and Japan
19 Denmark
20 Denmark, Germany, and Sweden
21 & 22 Japan
23 Indonesia
24 Germany
25 Japan
26 Sweden, The Netherlands
27 Austria and Greece