Briefing presented to the...

NUCLEAR WASTE TECHNICAL REVIEW BOARD

by
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Director, Office of Hazardous Materials Planning and Analysis Research and Special Programs Administration

July 13, 1994
Denver, Colorado
Introduction

- Overview
- Federal Roles and Authorities
- Safety Regulatory Program
  - Preemption
- External Relationships
- Mandated Studies
  - Mode and Route
  - Dedicated Train
- Current Nuclear Issues
- Discussion
Operating Elements - High Level Radioactive Materials

U.S. COAST GUARD

FEDERAL HIGHWAY ADMINISTRATION

RESEARCH AND SPECIAL PROGRAMS ADMINISTRATION

FEDERAL RAILROAD ADMINISTRATION
National Transportation Strategic Plan

Goal # 4.4:
- Promote Safe and Secure Transportation

Objectives:
- Significantly reduce deaths and injuries on our transportation system, which will reduce the burden on our health care system
- Minimize the dangers to communities and industry associated with the transportation of goods

RSPA Goal:
- Significantly improve the safety of transporting hazardous materials on our air, water, surface and pipeline transportation network
Federal Roles and Authorities

Regulators

- Hazardous Materials Transportation Act
- Nuclear Waste Policy Act
- Nuclear Waste Policy Amendments Act
- Atomic Energy Act

Regulated

- Nuclear Waste Policy Act
- Nuclear Waste Policy Amendments Act
- Atomic Energy Act
DOT - NRC
Memorandum of Understanding (MOU)

Overlapping Regulatory Responsibilities...
MOU Adopted in 1979

- DOT has responsibility for developing overall safety standards for mechanical condition of carrier equipment, driver qualifications, loading and unloading, vehicle placarding, and classifying materials

- Responsible for design specifications and performance requirements of packages for "low-level radioactive wastes"

Cont.
Memorandum of Understanding (MOU)

- NRC is responsible for regulating receipt, possession, use, and transfer of by-product, source, and special nuclear materials

- NRC reviews and approves package design for "high-level spent nuclear fuel"
DOT - DOE

Memorandum of Understanding (MOU)

- DOT and DOE both have responsibilities under the Nuclear Waste Policy Act
- To ensure that there would be no duplication of effort, MOU adopted in 1985
- MOU specifies that management of transportation under NWPA resides with DOE/OCRWM
- Transportation to any repository developed under NWPA will be subject to applicable DOT regulations
- Provides for procedures for consultation and exchange of information
The Hazardous Materials Transportation Act

The Secretary shall issue regulations for the safe transportation of hazardous materials in intrastate, interstate, and foreign commerce.
Hazardous Material -

A substance or material determined by the Secretary of the Department of Transportation to pose an unreasonable risk to Health, Safety or Property [including the environment].
Hazardous Materials Incidents by Hazard Class

Total Number of Incidents in 1993 = 12,846*

<table>
<thead>
<tr>
<th>Class</th>
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<td>Dangerous When Wet Material</td>
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<td>Irritating Material</td>
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*Source - Hazardous Materials Information System
Rulemaking

- Hazardous materials regulations set the framework
- Primarily a prevention activity...that is, rules of operating practice which, if rationally conceived and consistently followed, will minimize the chances of system failures

- Principal Components:
  - Classification
  - Packaging
  - Operations
  - Communications
Preemption

Any requirement of a State or political subdivision thereof or Indian tribe is preempted if...

- Compliance with both the State or political subdivision or Indian tribe requirement and any requirements of an applicable federal regulation is not possible, or
- The State or political subdivision or Indian tribe requirement as applied creates an obstacle to the execution of an applicable federal regulation, or
- Any provision concerning a "covered subject" which is not "substantively the same" as the hazardous materials regulations
Highway Routing of Spent Nuclear Fuel

• Most extensive hazardous materials rulemaking conducted to date

• HM-164 requires Highway Route-Controlled Quantity radioactive materials to be transported either over:
  
  – Interstate system highways selected to reduce time in transport or
  
  – A state designated alternative route
FEDERAL RAILROAD ADMINISTRATION
HIGH-LEVEL NUCLEAR WASTE
INSPECTION POLICY

Prior to the First Shipment:

- Inspect track and signal system along the designated route
- Conduct inspections to assure that train crews are complying with carrier operating rules
Prior to First and Subsequent Shipments:

- Locomotives, cask and idler cars, and cabooses (if used) will be inspected at origin.

- Cask car inspected for compliance with hazardous materials regulations covering placarding, shipping papers, crew notification and train placement requirements.

- Follow-up inspections for track, signal systems and operating practices conducted at intervals not to exceed six months.

FEDERAL RAILROAD ADMINISTRATION
HIGH-LEVEL NUCLEAR WASTE INSPECTION POLICY
# Domestic and International Spent Fuel Shipments: 1979-1994

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Source: Nuclear Regulatory Commission.
* To date
Government - Industry Relations

- Shippers and Carriers of Radioactive Materials
- National Governors Association
- Federal Agencies
- Association of American Railroads
- Enforcement Community
- National Conference of State Legislatures
- National Congress of American Indians
- The Public
- Edison Electric Institute
- Brokers and Suppliers
- State and Local Emergency Preparedness Organizations
- Western Interstate Energy Board
- AFL-CIO
Emergency Preparedness Grants Program

- 47 States, D.C., 3 Territories, 7 Indian Tribes Participating
- 58 Grants, totaling $8.4 million
- 180,000 responders will be trained with grant funds in first year
- National Curriculum guidelines distributed
- Funded by Registration Program
MANDATED STUDIES

Emphasis: Public Safety

- Mode and Route Study
- Dedicated Train Study
Mode and Route Study

Required by:


Purpose:

- "...To determine which factors, if any, should be taken into consideration by shippers and carriers in order to select routes and modes which, in combination, would enhance overall public safety..."

- "...Assess the degree to which various factors...affect the overall public safety of such shipments..."
Mode and Route Study

Public Comments:

- Perceived Risks
- Safety Afforded by the Cask
- Weights for Selection Factors
- Questionable Utility
Mode and Route Study

Status:

- Technical Advisory Group Meeting: May 1993
- List of Preliminary Factors Compiled
- Draft Report for Public Comment: Fall 1993

Schedule:

- Planned Availability: Fall 1994
Dedicated Train Study

Purpose:

• Assess the comparative safety of transporting high-level radioactive materials

• HMTUSA requires reassessment of regulations based on study findings
Dedicated Train Study

**Status:**
- Currently being Reviewed by FRA

**Schedule:**
- Planned Availability Fall: 1994
Current Nuclear Issues

- "Urgent-Relief Acceptance of Foreign Research Reactor Spent Nuclear Fuel"

- New York City application for waiver of preemption
  - Equal or greater level of protection to the public than hazmat regulations
  - Did not unreasonably burden commerce
  - After 1990 amendments, DOT has discretion to grant a waiver of preemption