Stakeholder Perspectives on the... Transport of Nuclear Waste

Ken Niles, Assistant Director, Oregon Department of Energy

June 13, 2018
Western Governors’ directive:

“safe and uneventful”
Type B cask testing
Accident prevention measures
Western Governors’ Association
Policy Resolution 2016 - 03

Transportation of Radioactive Waste, Radioactive Materials, and Spent Nuclear Fuel

A. BACKGROUND

1. Large amounts of radioactive waste have been, and will continue to be, transported through western states, both as a result of environmental cleanup of federal sites involved in the development and manufacture of nuclear weapons and for storage or disposal of spent nuclear fuel used to generate electricity.

2. The Waste Isolation Pilot Plant (WIPP) located in New Mexico was constructed to serve as a permanent repository for defense-related transuranic (TRU) waste. On March 26, 1999, WIPP received its first truck shipment of TRU waste from the Los Alamos National Laboratory.
Western Governors’ Association
Policy Resolution 2016 - 03

Transportation of Radioactive Waste,
Radioactive Materials, and Spent Nuclear Fuel

• safe and uneventful transport...must be paramount
• early coordination and effective communication...is essential
• the WIPP transportation program is an excellent model...a similar guide should be used for planning for shipments of spent fuel
• full commitment and cooperation from the rail industry is needed
• all costs paid for by nuclear generators and federal government
DOE funding to states

- DOE provided sufficient funding to Western states to develop the WIPP transport program
- DOE continues to provide funding while shipments continue
- For NWPA shipments, DOE has provided limited funding for meetings and regional staff support, but not to fund state personnel
- DOE not consistent through the years on level of engagement it wants from the states
High-Level Radioactive Waste Committee

Statement of Policy

This document provides information on the Carbon Dioxide Removal (CDR) process. The CDR process is a method to reduce greenhouse gas emissions by capturing carbon dioxide from the atmosphere and storing it in geological formations. This process is seen as a key component of strategies to mitigate climate change and combat global warming.

Background and Context

1. The aim of the CDR process is to reduce the concentration of carbon dioxide in the atmosphere, thereby mitigating the effects of climate change.
2. This document highlights the importance of CDR in the context of international agreements and commitments to reduce greenhouse gas emissions.

Statement of Policy

The CDR process is expected to play a significant role in achieving net-zero emissions by 2050, as outlined in the Paris Agreement. The adoption of CDR technologies is crucial for countries and industries aiming to meet their climate goals and contribute to global efforts to combat climate change.

Background and Context

1. The successful implementation of CDR technologies depends on various factors, including technological advancements, policy support, and public acceptance.
2. To ensure the effective deployment of CDR technologies, international cooperation and collaboration are essential, as highlighted in the document.

Statement of Policy

The CDR process is not without challenges. The document outlines the technical, economic, and regulatory barriers that need to be addressed to enable the widespread adoption of CDR technologies.

Background and Context

1. The high cost of CDR technologies remains a significant barrier, requiring investment in research and development to reduce costs and increase the viability of these technologies.
2. Regulatory frameworks and policies have a crucial role to play in facilitating the implementation of CDR technologies, as emphasized in the document.
Statement of Policy

DOE should work collaboratively with Western states to develop a comprehensive transport safety program for the shipment of spent nuclear fuel and high-level radioactive waste (SNF/HLW) to consolidated storage sites and/or a repository. A previous collaboration resulted in the development of a highly-regarded transport safety program for shipments of transuranic waste to the Waste Isolation Pilot Plant (WIPP).
High-Level Radioactive Waste Committee Paper

The “WIPP Transportation Model” and its Application to SNF/HLW Transport
Number A-1

• develop and maintain a “safe and uneventful” transport program
• follow the WIPP model as closely as possible for highway shipments
• use the WIPP transport safety program as a starting point for rail
• commit to a collaborative approach to develop a rail safety program
• Physical protection requirements for spent fuel transport

• Ship oldest fuel first

• Rail route safety

• Rail shipment inspection
• Social risks in spent nuclear fuel transport
• Full scale cask testing and cask confidence
• Origin site coordination
• State and local emergency response
Nuclear Waste Policy Act (as amended)

Section 180 (c)

“The Secretary shall provide technical assistance and funds to States for training for public safety officials of appropriate units of local government and Indian tribes through whose jurisdiction the Secretary plans to transport spent nuclear fuel or high-level radioactive waste...The Waste Fund shall be the source of funds...”
“(2) Assistance.—The Secretary shall, subject to the availability of appropriations, provide in-kind, financial, technical, and other appropriate assistance, for safety activities related to the transportation of high-level radioactive waste or spent nuclear fuel, to any entity receiving technical assistance or funds under paragraph (1).
Eddy-Lea Energy Alliance Storage Concept
THERE'S A LOT LEFT TO DO.
Minimum 3 years for training
What are your questions?