



U.S. Department of Energy
Office of Civilian Radioactive Waste Management



National Transportation Update

Presented to:
Nevada Legislature's Interim Committee on
Feasibility of Long-Range Mass Transit within State
and to Urban Areas of Neighboring States

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March 2, 2004
Las Vegas, NV

EXHIBIT E Mass Transit

Document consists of 16 pages.

☒ Entire document provided.

☐ Due to size limitations, pages _____ provided.

A copy of the complete document is available through the Research Library (775/684-6827 or e-mail library@lcb.state.nv.us).

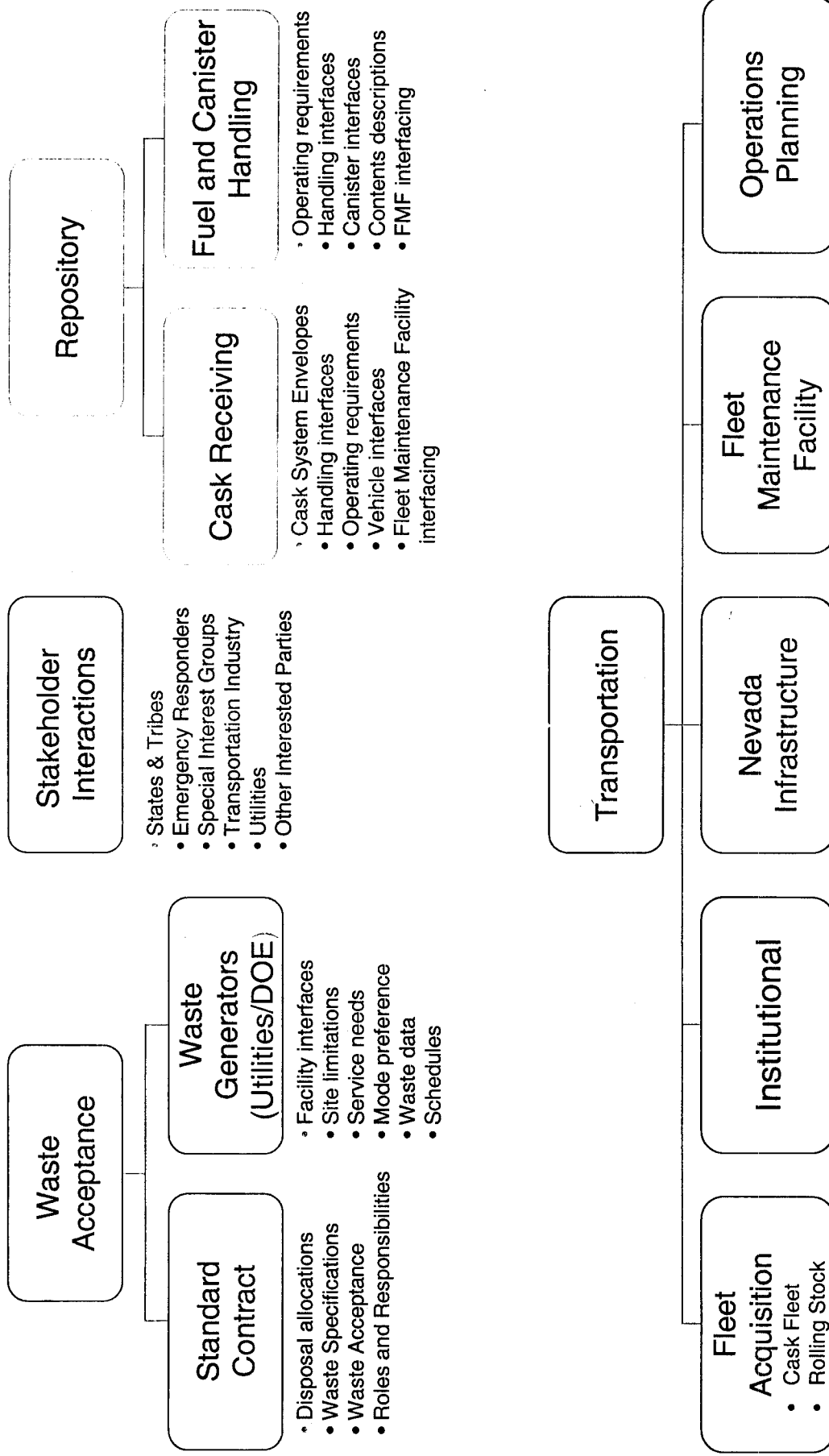
Meeting Date: March 2, 2004

Office of National Transportation Mission

MISSION: The Mission of the Office of National Transportation is to provide the OCRWM and the public with safe, secure and efficient transportation. This includes planning, developing and operating a transportation system. This system will be used to move spent fuel and high level waste from private and Federal facilities and storage sites to a repository at Yucca Mountain.



Transportation Program Interfaces



Transportation Program Status

- **Final Environmental Impact Statement (FEIS) for Yucca Mountain Repository issued in 2002**
 - **Stated a preference for mostly rail as the transportation mode nationally, and in Nevada**
 - **Five alternative corridors for providing rail access to Yucca Mountain were analyzed in the FEIS**



Transportation Program Status

- The Department announced its preference for Caliente corridor and Carlin as the secondary preference in December 2003
- The preference took into consideration:
 - Concerns expressed by Nevadans
 - National Security issues
 - Minimizing land use conflicts
- No formal decisions on mode of transportation or corridor in Nevada have been made yet



Transportation Program Status

- Where we are going
 - Issue mode of transport and if “mostly rail” corridor Record of Decision (ROD)
 - Cask and rolling stock procurement activities began this year
 - If “mostly rail” mode in Nevada is selected, begin EIS for rail alignment
 - ♦ OCRWM will solicit public comments through EIS scoping process
 - Expand institutional collaboration on transportation system development



Building on Past Experience

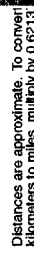
- The Department will use past experience in transporting nuclear materials, as well as best practices from domestic and foreign shipments
 - Roughly 3,000 spent nuclear fuel shipments in the U.S. during the past 30 years over 1.7 million miles
 - 754 Navy container shipments over 1 million miles since 1957 (as of January 20, 2004)
 - Over 2,300 shipments to the Waste Isolation Pilot Plant in New Mexico over 2.3 million miles since 1999
 - Worldwide, more than 70,000 metric tons of spent fuel safely shipped
 - ♦ This is more than the entire volume allowed by statute to go to Yucca Mountain
- There has never been a transportation-related release of radioactive material harmful to the public or the environment



Nevada Rail

Final

Impact Statement



Comparison of Rail Corridors

	CALIENTE	CARLIN	CALIENTE- CHALK MTN.	JEAN	VALLEY MODIFIED
Corridor length ¹	319 miles	323 miles	214 miles	114 miles	98 miles
Construction time	46 months	46 months	43 months	43 months	40 months
Travel time from junction with mainline to YM	10 hours	9 hours	8 hours	4 hours	3 hours
Est. life-cycle cost (2001 \$)	\$880 million	\$821 million	\$622 million	\$462 million	\$283 million
Land ownership	BLM >92% AF 5% DOE 2% Private <1%	BLM >86% AF 5% DOE 2% Private 7%	BLM 56% AF 16% DOE 27% Private 0.6%	BLM 83% AF 0% DOE 12% Private 5%	BLM >53% AF <11% DOE 32% Private 0.3% Fish & Wildlife 3%
Land use conflicts					
<i>Tribal</i>	Potential: one alt. bisects Shoshone land	Potential: one alt. bisects Shoshone land	None	None	None
<i>Wilderness areas</i>	Passes near	Might encroach	Passes near	Adjacent to	No official areas
<i>Air Force</i>	Resolve through alignment	Resolve through alignment	Significant national security issues	None	None
Counties impacted and population (2000 estimate)	Lincoln 4,200 Nye 32,500 Esmeralda 970	Eureka 1,650 Lander 7,100 Nye 32,500 Esmeralda 970	Lincoln 4,200 Nye 32,500	Clark 1.4 million Nye 32,500	Clark 1.4 million Nye 32,500

¹ Lengths vary with specific alignments, which can be used to mitigate impacts (e.g., tribal/Air Force land conflicts).

* Does not reflect recent acceleration of growth rate



Recommendations Voiced by Nevada Officials

- **Avoid populated areas, especially the Las Vegas Valley**
 - Resolution passed by Las Vegas City Council banning transportation of nuclear waste
 - Clark County voiced opposition as well
- **Employ maximum use of rail**
 - Requires fewer shipments vs. tens of thousands of legal weight truck shipments



Application for Administrative Land Withdrawal

- An Application for Administrative Land Withdrawal was published in the *Federal Register* in December
 - Existing land uses will be honored
 - Segregated land is defined by global positioning satellite data that defines a centerline, and 1/2 mile on either side
 - ♦ Preserves alignment options within the preferred corridor
 - For final rail alignment, affected land would be reduced to ~30 meters on either side of the selected centerline
 - New land uses that do not conflict with environmental analyses, design work, or construction and operation of the railroad will be considered



Nevada Rail Line Operation

- OCRWM will evaluate a range of potential options for Nevada Rail operations if rail mode is selected
- Interest expressed in common carrier use of any rail line selected will be considered
- OCRWM welcomes input on this and other issues associated with future transportation operations



Transportation Institutional Program Activities

- Build on established regional planning process
 - Nevada is involved through Western Interstate Energy Board
- Participate in and support Transportation External Coordination / Working Group
- Cooperatively develop transportation institutional and communications approaches
- Work together on route assessment methodology and alternative route selection analyses
- Identify and summarize existing emergency response capabilities and available training
- Develop approach to Section 180 (c) funding and technical assistance



Summary

- **Successful implementation of a safe, secure and efficient transportation system to move spent fuel and high level waste to a repository is achievable by 2010**
- **As decisions are on mode and corridor are made, there will be opportunities for input on**
 - Rail alignment (if mostly rail is selected as the mode)
 - Operational aspects of the transportation system
 - Other topics of interest and concern



Backup Slides



Rail Versus Truck Shipments

- Rail cask typically holds
 - 24-36 pressurized water reactor spent fuel elements
 - 32-68 boiling water reactor spent fuel elements
- Resulting in
 - 130 rail shipments per year
 - 45 truck shipments per year
- Truck cask holds
 - 1 to 4 PWR elements
 - 2 to 9 BWR elements
- Resulting in
 - 2,200 legal weight truck shipments per year

