State of Nevada Perspective on the U.S. Department of Energy Yucca Mountain Transportation Program - 8154

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Waste Management 2008
Phoenix, AZ
February 25, 2008
Unresolved Issues - 1986
DOE Transportation Institutional Plan

- Transportation of Defense Waste
- Prenotification
- Physical Protection Procedures
- Highway Routing
- Rail Routing
- Inspection and Enforcement
- Emergency Response
- Liability Coverage
- Cask Design and Testing

- Overweight Truck Shipments
- Rail Service Analysis
- Mixture of Modes
- Infrastructure Improvements
- OCRWM Training Standards
- Transportation Operational Procedures
- State, Tribal, and Local Regulation of Transportation
State of Nevada Transport Safety & Security Recommendations to DOE

- Oldest Fuel First
- Mostly Rail (65-75%)
- Dual-Purpose Casks
- Dedicated Trains
- Full-scale Cask Testing (Regulatory & Extra-regulatory)
- NEPA Process for Selection of Rail Spur

- WIEB “Straw Man” Routing Process
- Sec 180(c) Program Rulemaking
- State Regulatory Enhancements (Safety & Perception)
- Terrorism and Sabotage Concerns

*Human Factors Management*
Comments on DSEIS: General

- Failure to Meet Stated Purpose of the Draft SEIS Relative to NRC Licensing Process and DOE Proposed Repository Infrastructure Improvements
- Failure to Provide a Reasonable No-Action Alternative
- Failure to Provide Information Needed to Evaluate the Proposed Action (the TAD Canister System, Aging Facility, Drip Shields, and Emplacement Drifts)
- Failure to Evaluate Preclosure Impacts (military aircraft over flights, residual contamination from previous site activities)
- Failure to Evaluate Postclosure Impacts (DOE Total System Performance Assessment absent final EPA Standard, Potential Igneous Activity, Compliance with RCRA)
- Failure to Evaluate Cumulative Impacts (Repository Capacity Expansion)
Comments on DSEIS: Transportation

• TAD Canisters
• Overweight Trucks
• SNF Characteristics
• ALARA
• Impacts of Accidents
• Impacts of Acts of Sabotage & Terrorism
• Shipment Routes
Potential Rail Routes to Yucca Mt. via Proposed Caliente Spur (Suite of Routes from Kansas City and Memphis Gateways)

This map depicts routes for the Mostly Rail Scenario from nuclear waste shipping sites to the proposed Yucca Mt. repository via the proposed Caliente spur. It shows routes on Class I Track from the shipping sites to the gateways of Kansas City and Memphis. The map also depicts likely highway routes from six reactor sites that ship by legal weight truck under the Mostly Rail Scenario.
Comments on Rail Corridor DSEIS & Rail Alignment DEIS

• Selection of Caliente Corridor
• Consideration of Mina Corridor
• Information Needed for NEPA Review
• Surface Transportation Board
• Shared Use and Induced Traffic
• Feasibility and Cost
• Impacts on Native American Interests, Grazing, Mining, Residential Development, Recreation, Aesthetic Resource
NANP Comments to DOE, 1995

Criteria for Comparative Evaluation of Rail Spur Route Options

- Impacts on the human environment, with particular attention to public health and safety and impacts on highly populated areas
- Engineering feasibility, with particular attention to mountain crossings, seismic hazards, and surface flood hazards
- Impacts on critical environmental resources
- Cost of construction, predictability of costs
- Right-of-way acquisition, avoidance of private lands
- Impacts on Native American lands and cultural resources
- Potential conflicts with U.S. Air Force
- Economic development costs and opportunities, addressing both standard and special (risk-induced) socioeconomic impacts
- Specifically address the potential impacts and risks of rail shipments through Las Vegas on UP mainline
Caliente Corridor Fails NANP Criteria

Feasibility, Safety, Cost, Environmental Resources

White River, Timber Mountain Pass

Feasibility, Safety, Cost, “City”

Garden Valley, Golden Gate

Feasibility, Safety, Cost, Cultural Resources

Cow Canyon, Reveille Valley

Community Impacts, Limited Economic Benefits

City of Caliente, Lincoln County
An Artist at the End of the World

In an attempt to finish what may be the biggest sculpture on earth.

By Michael Kimmelman
Old and New Feasibility Issues: Caliente

Geothermal Sinkhole in Proposed Alignment, 2008

Flooding on UP Mainline to Caliente, 1907 & 2005
Rail Shipments Through Las Vegas to Proposed Caliente Rail Line

- Minimum: 8% of Total Rail Casks, 755-1,963 Casks, 5-13 Trains per year, for 50 Years ("Representative Routes," DSEIS, 2007)
- Maximum: 79% of Total Rail Casks, 7,494-19,048 Casks, in 46-108 Trains per Year, for 50 Years ("Southern Consolidated Routes," PIC, 1996)
- Current Estimate: 40% of Total Rail Casks, 3,762-9,645 Casks, in 23-62 Trains per Year, for 50 Years ("Suite of Routes," NANP, 2008)
- Plus 2,650-5,025 OWT truck shipments for 50 years, on I-15, I-215, & US 95
Rail & Truck Routes Through Clark County Radiological Region of Influence

- 95,000 residents within 0.5 mi of rail route
- 34 hotels and 49,000 hotel rooms within 0.5 mi of rail route
- 40,000 non-resident workers & visitors within 0.5 mi of rail route
- 113,000 residents within 0.5 mi of truck routes (I-15, I-215, & US 95)
- 1.8 million residents within 50 mi ROI for transportation accidents and sabotage
Proximity of Rail Shipment Route to “The Strip”
Union Pacific Railroad

Las Vegas

x

Union Pacific Railroad
Safety & Security Concerns in Las Vegas
Proximity of “The Strip” to UP RR to Caliente
Proximity of Rail Route to Las Vegas Mayor’s Office

Radiation Exposure Zone
Nevada Perspective on DOE Accomplishments After 20 Years - 1

• Approved LWT Cask Designs: GA-4 & GA-9
• CVSA Truck Inspection Program
• Action on Dedicated Train and Sabotage Issues
• Better Understanding of Native American, Sec 180©, E R Training, Intermodal, and Routing Issues
• Lessons Learned from WIPP Transportation Program
• Public Debate over Risk Issues and Stakeholder Roles
Nevada Perspective on DOE Accomplishments After 20 Years - 2

- Most Institutional Issues Not Resolved
- Most Nevada Safety and Security Concerns Not Addressed
- DESIS: Unproven TAD Canisters, Hotter SNF, Operational Challenges, Routing Questions
- RA DEIS: Undesirable Rail Alignment, Unacceptable Impacts, STB Approval Required
- Failure to Address Major Transportation Impacts in Las Vegas and Clark County
- No National Transportation Plan Yet