Yucca Mountain Update and Transportation Impacts

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What Exists Today at Yucca Mountain Cannot be used for Waste Storage or Disposal

- 5-Mile Exploratory Tunnel
- No waste disposal tunnels (Over 40 miles needed)
- No waste handling facilities
- No state water permit
- No construction authorization
- No railroad
- Expired BLM land withdrawal
Nevada Opposition: Stronger than Ever

- Governor Brian Sandoval
- Commission on Nuclear Projects
- Attorney General Adam Paul Laxalt
- Secretary of State Barbara Cegavske
- Congressional Delegation (5 of 6)
- Mayor of Las Vegas, Las Vegas City Council, Clark County Commission
- Majority and Minority Leaders of the Legislature
- AJR 10 Resolution of Opposition: Assembly 32-6-4; Senate 19-2
Recent Developments

• President’s FY 2018 Budget Blueprint: Requested $120 million for DOE and $30 million for NRC to restart Yucca Mountain licensing activities and initiate a “robust” interim storage program. (March 2017)

• Energy Secretary Rick Perry Visit to Yucca Mountain (March 2017)

• Energy Secretary Rick Perry Meeting with Gov. Sandoval (March 2017)

• Lawsuit filed by State of Texas seeking expedited NRC licensing and other measures (State of Nevada Petition to Intervene April 2017)

• DOE and NRC Budget Request Details Released (May 2017)

• U.S. House of Representatives, Committee on Energy and Commerce, Reported H.R. 3053 Nuclear Waste Policy Amendments Act of 2017 (June 2017); Floor vote expected in January 2018

• Continuing Resolution for FY 2018 through January 19, 2018 provided no new funding for Yucca Mountain Licensing

• Licensing proceeding could resume in 2018 (cost $2 billion, 3-5 years)
DOE Proposed Yucca Mountain Transportation System (2008 FSEIS)

• Ship 9,495 rail casks (2,800 trains) & 2,650 truck casks over 50 years [p.6-8]
• If No 2nd Repository: 21,909 rail casks (about 6,700 trains) & 5,025 truck casks [p.8-41]
• Average 1-3 trains & 1-2 trucks per week
• Every day, for 50 years, one or more loaded casks on rail or road, from 76 shipping sites
• Cities would be heavily impacted by shipments
• Urban infrastructure impacts must be assessed
Transportation Radiological Impacts

- incident-free exposures to members of the public residing near or traveling on transportation routes (up to 0.016 rem to a person in a gridlock traffic jam); [Pp.6-20, 6-21, 8-41]

- incident-free exposures to transportation workers such as escorts, truck drivers, & inspectors (by administrative controls, DOE would limit individual doses to 0.5 rem per year; the allowable occupational dose is 5 rem per year); [Pp.6-21, 8-41]

- release of radioactive material as a result of the maximum reasonably foreseeable transportation accident (probability about 5 in one million per year), involving a fully engulfing fire, 34 rem dose to the maximally exposed individual, 16,000 person-rem population dose and 9.4 latent cancer fatalities in an urban area, and cleanup-costs of $300,000 to $10 billion; [Pp.6-15, 6-24, G-56]

- release of radioactive material following a successful act of sabotage or terrorism, using a high-energy density device, resulting in 27-43 rem dose to the maximally exposed individual, 32,000-47,000 person-rem population dose and 19-28 latent cancer fatalities in an urban area, and cleanup costs similar to a severe transportation accident. [Pp.6-27, CR-467]

800 meter Region of Influence for Routine Radiation from Rail and Truck Shipments

Las Vegas Strip
Yucca Mountain Transportation Impacts: Las Vegas

800 meter Region of Influence for Routine Radiation from Rail Shipments
Shipping Cask Vulnerability in Severe Accident Fires – Ongoing Debate

MacArthur Maze - 2007

Baltimore Rail Tunnel - 2001
Shipping Casks Are Vulnerable to Terrorist Attacks

Truck Cask Test, 1982

Rail Cask Test, 1998
What Should Be Done?

- Walk away from Yucca Mountain
- Restructure high-level nuclear waste program as recommended by Blue Ribbon Commission (BRC) on America’s Nuclear Future (2012)*
- Implement BRC recommendations for new repository performance standards and repository consent-based siting
- Address stakeholder concerns about at-reactor storage
- Implement National Academy of Sciences (2006)** and BRC transportation safety & security recommendations
- Implement BRC recommendations about consolidated interim storage, with priority for shutdown reactors
- Assess urban transportation infrastructure impacts & needs

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