

Spent Nuclear Fuel and New Mexico

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History of Spent Nuclear Fuel (SNF)

- For more than 20 years, the U.S. Department of Energy (DOE) studied the viability of constructing a deep geological repository in the West, at Yucca Mountain.
- Obama Administration cancelled the Yucca Mountain project.
- Legal rulings and Congressional action may yet again lead to the active consideration of the site over the next several years.
- Two private-led ventures, both in the West – one in New Mexico and the other in Texas (NRC license revoked due to financial constraints) have begun to pursue hosting a facility for interim storage of SNF.
- DOE began the process to seek voluntary host site for storage and disposal of both SNF and high-level radioactive waste (HLW) (the process has since been shelved).



History of SNF cont.

- **Western states through the Western Interstate Energy Board's (WIEB) High-level Radioactive Waste (HLW) Committee, have engaged with the DOE since the 1980's to develop an acceptable transportation program for SNF and HLW.**
- **Western Governors' policy: use the WIPP process.**
 - The HLW Committee, working with other state regional groups and affected Native American tribes, is qualified to assist DOE in developing a comprehensive transport safety program for SNF and HLW.
- **The Blue Ribbon Commission recommendation: WIPP provides a "successful model."**
 - In its January 2012 final report, the Blue Ribbon Commission (BRC) strongly recommended the WIPP transportation program as a model for federal partnership with states, recognizing that "[t]he WIPP facility.....provides a longstanding and highly successful model for partnering with states to achieve shared success in addressing issues related to the transport of nuclear materials.
 - The BRC found that: "States have extensive experience with transportation issues and important roles to fulfill with respect to issues such as routing, inspections, training, emergency preparedness, communications, public information and security for radioactive materials and other hazardous shipments."



Section 145. NWPA

- **In General.** – The Secretary may [select the site evaluated] under section 144 that the Secretary determines on the basis of available information to be [the most suitable] for a monitored retrievable storage facility authored under section 142(b)(1) that is an integral part of the system for disposal of spent nuclear fuel and high-level radioactive waste established under this Act.
- **Limitation.** – The Secretary may not select a site under subsection (a) until the Secretary recommends to the President the approval of a site for development as a repository under section 114(a).
- **Notification Before Selection.** – (1) At least 6 months before selecting a site under subsection (a), the Secretary shall notify the Governor and legislature of the State in which such site is located, or the governing body of the affected Indian tribe where such site is located, as the case may be, of such potential selection and the basis for such selection.
- (2) Before selecting any site under subsection (a), the Secretary shall hold at least one public hearing in the vicinity of such site to solicit recommendations of interested parties with respect to issues raised by the selection of such site.



Western States Involvement

- Through the WIEB High Level Radioactive Waste committee:
 - Develop Policy and Recommendations to the DOE as it relates to Spent Nuclear Fuel shipments;
 - Remain actively involved in the Ad Hoc Working Group (group activities significantly reduced by DOE in FY18)
 - Participate in conference calls, webinars, and face-to-face meetings with the DOE-NE, FRA, and the private rail carriers;
 - Likelihood of a western state hosting an interim storage facility (private sector).

National Transportation Stakeholders Forum – Rail/Routing Ad Hoc Working Group

- In 2015, the Department of Energy (DOE) created the Rail/Routing Ad Hoc Working Group
- The DOE plans to use rail as the primary mode for future transport of commercial spent nuclear fuel
- Due to gaps in knowledge at the federal, state, and tribal level regarding railroad operations, route selections, inspection procedures, and other aspects of rail shipments

Purpose of the Rail/Routing Ad Hoc Working Group

- Facilitate dialogue between federal staff from the DOE, the Federal Rail Administration (FRA), Tribes and states, and other transportation stakeholders,
- To develop a common understanding of how future rail shipments of spent nuclear fuel will operate, and
- To identify outstanding issues or questions to resolve in advance of commencing shipping campaigns.



Work Products of the Ad Hoc Working Group

- Develop a work plan for the group and revisit/revise.
- Develop a priority list of rail-related questions or issues.
- Identify one or more individuals to take the lead.
- Document investigation and discuss issues in white papers.
- Post white papers to Rail/Routing Working group site.
- Coordinate informational webinars.
- Organize sessions at the NTSF and other forums, as appropriate.



Tasks of the Ad Hoc Working Group

- Address Nuclear Academy of Science/Blue Ribbon Commission (NAS/BRC) recommendations for mostly rail SNF shipping program
- Address NAS/BRC recommendation for using dedicated trains
- Address NAS/BRC recommendation to select routes for SNF transport

DOE FY18 Program Priorities

- Robust Interim Storage:
 - Draft Implementation Plan for a private services model for transportation and storage of spent fuel
 - Draft Implementation Plan for a government-owned, contract-operated (GOCO) model for transport and storage of spent fuel
 - Collect materials and information that could be used for a later request for proposals to acquire interim storage and transportation services



Other FY18 Program Activities

- **Continuing activities**
 - Engagement with tribal and state representatives
 - Development of the Atlas Railcar
 - Development of a generic design and topical safety analysis report (TSAR) for a pilot interim storage facility (ISF)
 - Systems analysis tool maintenance



Route Selection and States' Perspectives

Three main goals for the ideal route selection process:

- Promote safety and public acceptance of the shipping routes by making the federal government, not a private company, accountable for route selection;
- Allow resources (inspections, emergency response, etc.) to be focused by reducing the total number of potential routes; and
- Give states and communities sufficient time to prepare for shipments by eliminating the uncertainty regarding which routes will be used.



Significant differences between rail and highway shipments must be addressed.

- **Rail shipments occur on privately owned property instead of in the public right-of-way**
- **Private sector partnership could occur without violating federal law.**
 - What role does New Mexico as a government oversight entity have?
 - What are the expectations of the public?
 - Response community impacted by derailment or other incidents.
 - Are there environmental impacts in populated areas?
 - What are the social risks for SNF and HLW shipments through or to New Mexico?
 - The PRC expects to conduct end of route inspections for each SNF shipment

Questions

