

Transportation Planning Considerations: BRC Report Recommendations and Plans for Implementation

NEI Used Fuel Management Conference

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Topical Summary

- BRC report and recommendations
- Consolidated storage as a component of a comprehensive strategy
- Stranded fuel at shutdown plants
- Recent proposals for waste removal
- Transportation of stranded fuel—getting started
 - Logistics, planning, policy issues

NIC—Who We Are

- Leading American think-tank advocate for new nuclear in the U.S. and engagement of the American supply chain globally
- Members from every part of the nuclear energy community including key movers, suppliers, manufacturers and customers;
- Key focus on critical new nuclear infrastructure building blocks including key mover deployment; regulatory surety; supply-chain readiness; technology advancement; a sustainable fuel cycle; and an international nuclear commerce paradigm

Blue Ribbon Commission Recommendations

- BRC established Jan. 2010; final report issued Jan. 2012
- Two of the recommendations:
 - “Prompt efforts to develop one or more consolidated storage facilities”
 - “Early preparation for the eventual large-scale transport of SNF and HLW to consolidated storage and disposal facilities”

Consolidated Storage: One Element of a Comprehensive Strategy

- Storage capability is addressed in the NWPA
- Could enable U.S. Government to begin meeting its obligation to accept waste
- “Pilot” waste management program would demonstrate repository system will work when operational
- Platform for R&D for long-term storage
- “Buffer” capacity when repository is operational
- Removal of “stranded” fuel from shutdown reactors, enabling beneficial re-use
- Mitigating at-reactor costs when reactors cease operation

Stranded Fuel at Shutdown Plants

- Nine current shutdowns: Maine Yankee, Yankee Rowe, Connecticut Yankee, Humboldt Bay, Big Rock Point, Rancho Seco, Trojan, La Crosse, and Zion (approx 2,800 MTHM SNF, plus canistered GTCC waste)
- Three have announced plans to shut down before 2021—Oyster Creek, Kewaunee, and Crystal River
- Approximately 4,700 MTHM total (not including GTCC)

Recent Proposals

- On July 25, 2012, the House voted 327-98 (Shimkus Amendment) to provide \$10M to resume Yucca licensing
- DOE issued *Strategy for the Management and Disposal of Used Nuclear and High Level Radioactive Waste* in January 2013
 - Advocates a pilot interim storage project, starting with shutdowns, possibly by 2021
 - Would require legislative action to proceed
- House leadership has indicated new legislation that does not include Yucca Mountain will not be supported
- On April 25th, the Senate “Gang of Four” issued a “discussion draft” of potential legislation and a list of questions—comments due May 24th
- Covers management, financing, storage/repository linkages, transportation, defense waste

“Expedited” Consolidation: Resolution of Logistical, Planning and Policy Issues

- BRC noted “advance planning timeframes on the order of a decade could be required”
- Logistics Issues:
 - Transportation overpacks for canistered SNF and GTCC have been designed but not built; will take 4-6 years for existing and perhaps 8 years for new designs
 - If full-scale testing is required, will increase cost and schedule
 - Rolling stock procurement and S-2043; new standard, requires consist testing
 - “Early” procurement of equipment should commence now
 - Infrastructure at and near shutdown sites may need upgrading
 - Private sector logistics expertise will be needed in any case

Logistical, Planning and Policy Issues (Continued)

- Planning Issues:

- Coordination and partnering with States and Tribes; process is beginning through state regional groups and the National Transportation Stakeholders Forum
- Should include carrier and other industry representation
- NWPA Section 180(c) implementation should commence

- Policy Issues:

- Identification of a destination site!
- Need at a minimum new appropriations language
- Structural/organizational reform a must

Conclusion

- Acceptance of SNF from shutdown sites beginning in 2021 is achievable...just.
- Planning and coordination takes time, but so does acquisition and testing of casks, rolling stock, and associated equipment
- DOE has started work that would support a reformulated waste management program but clearly believes new legislation is needed
- Activities that need to start now are well-understood and should commence even before a destination is identified

NIC Technical Workshop

- Topic: “2021: DOE Pilot Consolidated Storage Project”
- Will be held June 26-27, 2013
- Crystal Gateway Marriott, Arlington, VA
- For further information, contact Caleb Ward, NIC, at chsward@gmail.com, 202-332-8155

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