

Managing the Back-End of the Nuclear Fuel Cycle

The Blue Ribbon Commission on America's Nuclear Future (BRC)
The Council of State Governments—Eastern Regional Conference
Northeast High-Level Radioactive Waste Transportation Task Force

Presentation by
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Blue Ribbon Commission Public Meeting, Boston, October 12, 2011

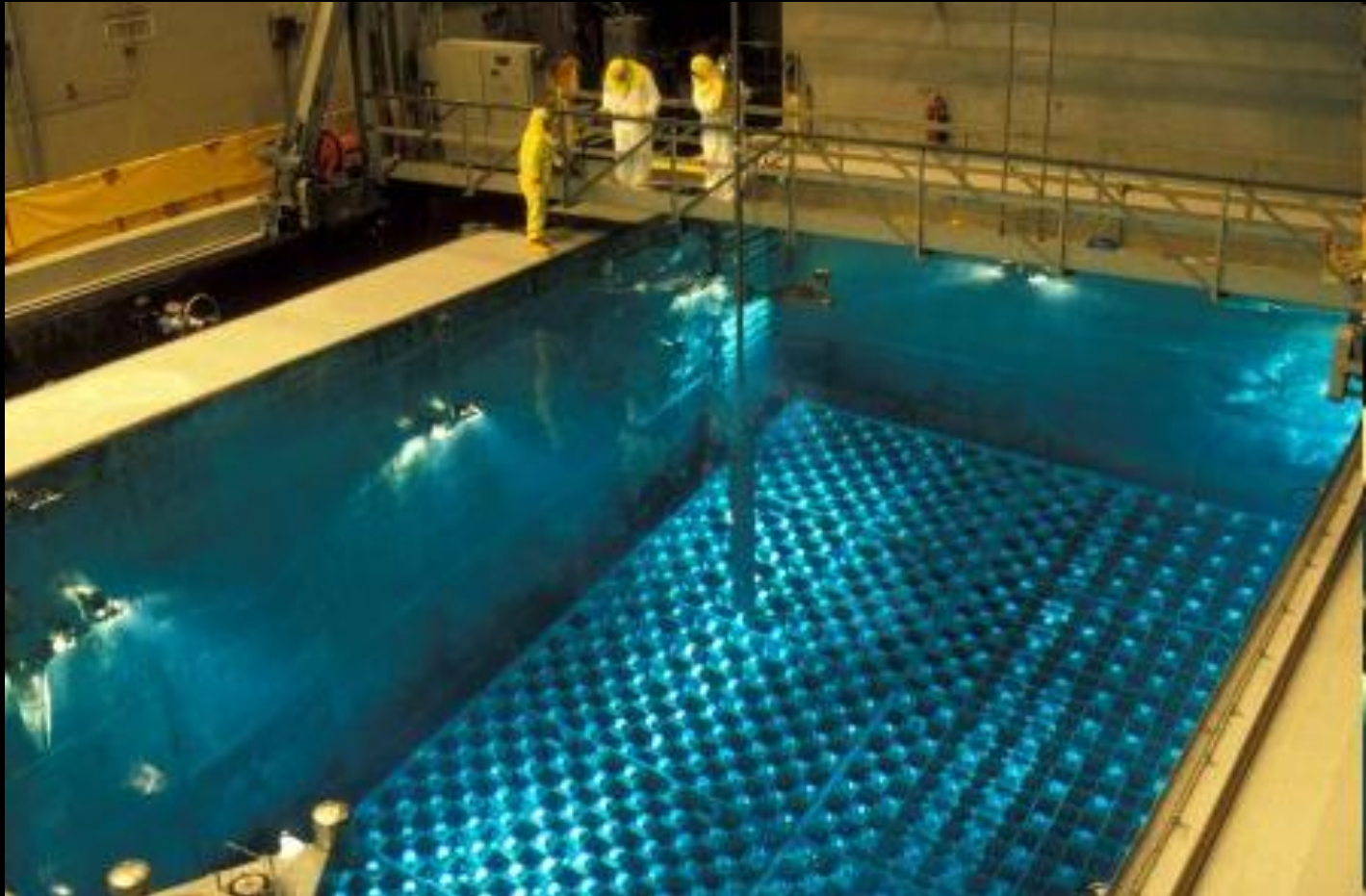
First principal finding of Transportation and Storage Subcommittee Draft Report to the Full Commission:

“Storage of nuclear materials at sites where these materials have been generated, including at commercial power plants and federal defense production sites, **will continue for many years.**”

→ Safety and Security of on-site spent fuel storage is of central importance to overall fuel management strategy, *with or without consolidated spent fuel storage.*



Spent Fuel Pool



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Dry casks



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Fukushima:

Spent fuel pools: concern about fuel damage due to loss of cooling

Dry casks: no concerns

United States:

Overcrowded spent fuel pools:

- Increased “heat load” increases the chance that loss of cooling will result in fuel damage and radiation release
- Increased “source term” increases the amount of radiation released



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What does the BRC Subcommittee say?

“The Subcommittee believes that the issue of pool storage and the potential for fires in pools that lose water through natural or man-made events must be carefully reexamined in light of the disaster at the Fukushima Daiichi plant.

The Subcommittee believes the NRC and industry are working appropriately to identify and address potential issues, but is continuing to closely follow developments on this issue.”



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What is the NRC doing?

- July 12, 2011 NRC's 90-day Task Force Report *Recommendations for Enhancing Reactor Safety in the 21st Century*:
 - No mention of spent fuel pools vs. dry casks
- October 5, 2011, NRC released staff report prioritizing the recommendations of the 90-day Task Force:
 - “Transfer of spent fuel to dry cask storage” warrants “further consideration and potential prioritization.”



What else does the BRC Subcommittee say?

Notes that 2006 National Academy of Sciences (NAS) study *Safety and Security of Commercial Spent Nuclear Fuel Storage*:

“Dry cask storage has inherent security advantages over pool storage...”

Subcommittee “recommends that the National Academies be engaged, once adequate information is available, to undertake an update of their earlier study of the safety and security of at-reactor storage.”



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Blue Ribbon Commission urges:

- **Prompt efforts** to develop a new permanent geologic disposal facility
- **Prompt efforts** to develop one or more consolidated interim storage facilities

But on efforts to enhance safety and security of on-site spent fuel, BRC punts to the NRC and the NAS.

Very disappointing.



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