

# Transportation and Storage Subcommittee - Addressing Comments on the Draft Reports

December 2, 2011



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## Process for Public Review and Comment

- Draft subcommittee report issued for public comment May 31, 2011; comments received from NGOs, industry associations, state regional groups, states and tribes, local governments and private citizens
- BRC draft report issued for public comment July 29; thousands of comments received
- Also received comments from the public meetings held in Denver, Atlanta, Boston, Washington and Minneapolis
- Many comments endorsed the overall strategy in the draft report; others offered specific changes or questioned specific findings and recommendations
- Comments reviewed and considered carefully

## Recurring Themes in Public Comments

- Reflect fuel storage lessons learned from Fukushima Daiichi
- More specifics needed on elements of the proposed storage system (capacity, duration, elements of negotiations)
- Questions raised about “standardizing” canister systems
- Use of terms such as “expediting” storage and developing capacity “promptly” imply haste at the expense of safety
- The hardened on-site storage (HOSS) proposal and all the elements thereof should be endorsed in the report
- More specifics about transportation systems and planning are needed, and how they contribute to safety



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## Recurring Themes in Public Comment (cont'd)

- Include recycling/reprocessing in consolidated storage design
- Current regulations do not allow for transport of higher-burnup fuels; 10 CFR Part 71 generally is outdated
- Discussion of “stranded fuel” dilemma is overstated
- Cost justification for consolidated storage unclear or incorrect
- Use existing DOE/Navy/other federal facilities for near-term storage
- Describe physical specifications of current dry storage systems
- Linkages between storage and disposal; long-term storage as *de facto* disposal



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# Proposed Changes

- **Fukushima Daiichi storage lessons learned**
  - Latest information suggests fuel in pools was not uncovered and pool inventory not extensively damaged. Shared pool and dry storage systems (and the fuel in them) were undamaged
  - NRC Task Force report recommended additional instrumentation in pools and enhanced makeup capability
  - NRC has identified for further consideration the issue of removal of fuel in pools to dry storage (SECY-11-0137)
  - The Subcommittee continues to believe NRC's evaluation processes are appropriate for resolving safety issues
  - Modify reports to reflect the above

## Proposed Changes (cont'd)

- **Specificity of storage capacity and duration of storage pending final disposal in a repository**
  - The Subcommittee believes flexibility and adaptability are key. Negotiations between a management entity and the host community will determine specific proposed elements
  - Reports should remain unchanged
- **The case for standardizing waste management systems**
  - Commenters noted potential value, but some specifications cannot be known at this time
  - Modify reports to state standardization is desirable; voluntary/cooperative efforts are to be encouraged



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## Proposed Changes (cont'd)

- **“Expediting” and “Promptly” at the cost of safety**
  - Use of these terms is relative, and the Subcommittee rejects the premise that prompt action implies compromising safety
  - Reports are clear on this point
- **The case for Hardened On-Site Storage (HOSS)**
  - The Commission received many hundreds of comments urging adoption of HOSS, and listened carefully at several meetings to testimony on this topic, both pro and con
  - Upon consideration, the Subcommittee has identified no new evidence to indicate the NRC process for evaluating this proposal or others is deficient or should be circumvented
  - Reports should continue to call for the NRC to evaluate technical merits through its established process



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## Proposed Changes (cont'd)

- **More needed on transportation systems and planning**
  - After HOSS, this was the most prevalent comment
  - Concerns raised:
    - Regulatory compliance alone does not ensure safety
    - Collaborative role of States and Tribes through the regional groups to plan for WIPP and other significant shipping campaigns
    - Long lead-times needed not just for planning and preparedness, but also design, development and testing of needed equipment
  - The Subcommittee agrees and will expand and modify this section of the T&S report
  - The Subcommittee proposes that a recommendation on transportation be included in the list of key recommendations in the final report of the BRC (discussed later)



## Proposed Changes (cont'd)

- **Recycling/reprocessing should be included in consolidated storage facility design**
  - Recycling/reprocessing not essential to storage
  - Reactor and Fuel Cycle Technologies Subcommittee is the lead BRC group examining issues of recycling and reprocessing
  - T&S report to remain unchanged
- **Current regulations do not allow for transport of higher-burnup fuels; 10 CFR Part 71 generally is outdated**
  - T&S report will be modified to reflect that regulatory changes will be needed to permit transport of higher-burnup fuels
  - NRC is reexamining how it regulates all aspects of spent fuel management.



## Proposed Changes (cont'd)

- **Discussion of “stranded fuel” dilemma is overstated**
  - Some commenters suggested “taking title” at reactor sites will solve the problem—however, recent proposals would not mitigate taxpayer liability or address the actual solution (removing the waste)
  - The Subcommittee agrees stranded fuel is not an urgent safety risk, but it does involve substantial cost, prevents beneficial redevelopment of shutdown sites, increases taxpayer liability, and is a problem that will (under any reasonable assumptions) only grow over time
  - Reports should include expanded discussion of this issue



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## Proposed Changes (cont'd)

- **Cost justification for consolidated storage is unclear/incorrect**
  - Commenters questioned how consolidated storage could decrease, not increase, system costs
  - The Subcommittee heard extensive testimony and commissioned a paper on the subject (Hamal et al.), which (among other things) examined eight previous cost estimate studies, and found that:
    - Previous studies usually included unrealistic assumptions
    - Storage capability provides optionality and operational advantages over a disposal-only system that can reduce overall costs
    - “Buying” initial capability requires a modest investment that can be expanded or not as future developments and circumstances require
  - Additional discussion of the cost findings and justification should be added to the reports



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# Proposed Changes (cont'd)

- **Use existing DOE/Navy/other federal facilities for storage**
  - Beyond the scope of the Commission
- **Describe physical specifications of current dry storage systems**
  - Description and specifications will be included
- **Linkages between storage and disposal; long-term storage as *de facto* disposal**
  - Subcommittee has been clear both are distinct and critically needed elements of a successful integrated system, and current linkages have not worked as intended



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# Proposed New Recommendation on Transportation—Justification

- Many commenters stated that transportation is THE activity that integrates waste acceptance, management and disposal; is the most visible aspect of waste management; and is the clearest indicator of whether the system as a whole is worthy of trust and confidence
- Commenters frequently cited findings and recommendations of the NAS' "Going the Distance" report issued in 2006
- Planning, preparedness, design, fabrication and testing require lead times on the order of a decade before waste acceptance begins—possibly before final selection of a destination site
- The Subcommittee reexamined its treatment of the transportation issue and is offering a potential new key recommendation for consideration by the full BRC

# Proposed New Key Recommendation on Transportation

- *“Prompt initiation of programs to prepare for future large-scale transport of spent nuclear fuel and high-level waste to consolidated storage and disposal facilities, including implementing transportation-related recommendations issued by the National Academies in 2006, undertaking planning activities with potentially affected states and tribes, and providing funding and technical assistance for related activities.”*



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