Blending of Low-Level Radioactive Waste

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Nuclear Energy Industry Principles for LLRW Management (2008)

1. Storage and disposal of nuclear energy industry LLRW is managed safely and securely.
2. Timely, safe, and secure disposal is preferable to long-term storage.
3. Regulation should not restrict safe and secure LLRW management options
4. States and LLRW compacts play key roles in the implementation of safe and secure LLRW management options.
5. An open and competitive market best facilitates development of innovative and cost-effective options for safe and secure LLRW management.

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EPRI Research Conclusions (2008)[1]

- Risk-informed changes to NRC guidance on concentration averaging (including blending) are warranted and justified
- Proposed changes will provide a more flexible basis for LLRW classification while still meeting disposal site safety performance objectives
- Such changes will enable, but not require, other affected parties to implement related processing and disposal options

[1]*Proposed Modifications to the NRC Branch Technical Position on concentration Averaging and Encapsulation* - EPRI Report 10116761 (ML090230195)

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EPRI Research Conclusions (cont'd)

- 104 U.S. nuclear power plants generate ~15,000 ft^3 of LLRW that would be disposed of as Class B/C LLRW without further processing
  - Consists of resins, filter cartridges and irradiated hardware
  - Approximately 2/3 by volume (at 65 plants) is currently being placed in safe and secure interim storage
  - Proposed modifications to the NRC guidance on concentration averaging and encapsulation would help facilitate processing and disposal of much of this LLRW

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Industry Perspective on NRC Staff Recommendation (SECY -10-0043)

- Support Option 2 recommendation to revise blending positions to be risk-informed and performance-based
- Support a rulemaking to explicitly require a site-specific evaluation
- Accept that efficiency will be obtained by linking with depleted uranium rulemaking
  - Blended LLRW is <u>not</u> a unique waste stream

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