

ISSUE 1: COMPATIBILITY AND INTEGRATION OF STORAGE AND TRANSPORTATION REGULATORY REQUIREMENTS FOR SPENT NUCLEAR FUEL

BACKGROUND:

Regulations for packaging and transport of spent nuclear fuel are contained in 10 CFR Part 71, while licensing requirements for spent nuclear fuel storage are in 10 CFR Part 72. One link between these two parts is 10 CFR 72.236(m), which provides that “in the design of spent fuel storage casks, considerations should be given to compatibility with removal of the stored spent fuel from a reactor site, transportation, and ultimate disposition.” Current transportation regulations are compatible with the International Atomic Energy Agency TS-R-1, “Regulations for the Safe Transport of Radioactive Material.”

ISSUE DESCRIPTION:

Part 72 allows storage systems to provide an interim solution until waste is dispositioned for final disposal. While many designs in the current generation of cask technologies are intended for use in both storage and transport, the vendor must obtain independent storage and transportation certificates. These certificates are seldom issued at the same time and could have differing content descriptions or conditions for use. Better integration between the storage and transport regulations could provide predictable transition from storage to transport and potentially minimize future handling needs and regulatory uncertainty.

CONSIDERATIONS:

A goal of the regulatory process improvement review is to identify enhancements for the spent nuclear fuel package certification review processes, including storage and transportation compatibility, that improve regulatory effectiveness and predictability. The NRC staff is considering:

1. Development of more detailed requirements regarding the aspects of transportation which should be considered as a part of storage licensing.
2. Revision of Part 72 to incorporate the preliminary determinations required under Part 71 prior to a package being used for transport.
3. Identification of common technical analyses within the storage and transportation regulations and incorporation of the different analyses into one regulation.
4. Revision of storage and transportation requirements to allow the issuance of a combined Certificate of Compliance.
5. Revision of Part 71 regulations to address unique aspects of the safe transportation of spent nuclear fuel after it has been in dry cask storage for a specified period.
6. Consideration of the impact Part 71 revisions would have on the ability of cask vendors to use storage systems for international transport.