CONSIDERATIONS FOR AN INTEGRATED STORAGE, TRANSPORTATION, AND DISPOSAL CANISTER

Abstract:

Direct disposal of the large canisters currently being used by the commercial nuclear power industry is beyond the current experience base domestically and internationally and potentially represents many other significant engineering and scientific challenges. Pragmatically, it is reasonable to assume that the packages that will be disposed of in the future may be significantly different from what is being used for storage today. A design concept was investigated for an integrated standardized modular storable, transportable, and disposable used fuel canister system based on small- capacity canisters, which can be emplaced in different overpacks for storage, transportation, and/or disposal. The premise behind the concept is that a small canister can be engineered to provide safety-related functions while deemphasizing reliance on structures, systems, and components that cannot be easily monitored or inspected (e.g., cladding integrity inside canister), works within multiple disposition paths, and provides flexibility for meeting existing and future licensing objectives and requirements. Various options for standardization and total waste management systems-level impacts are being explored in the Systems Architecture work being conducted by the Department of Energy. This study assesses some of the considerations associated with direct disposal of existing systems and changing to a smaller canister-based system.

You can find this proceeding at the below link:

<http://www.proceedings.com/18659.html>