

International Conference on Management of Spent Fuel from Nuclear Power Reactors: An Integrated Approach to the Back End of the Fuel Cycle



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Potential Interface Issues in Spent Fuel Management

Efficient spent fuel management (SFM) requires an evaluation of the potential interface issues among phases of the nuclear fuel life cycle: including: technical disconnects, policy considerations, and varied positions of the many stakeholders that influence management options and decisions. Because many issues affect multiple stakeholders and may require long lead times to resolve, it is important to identify interface issues early and solve them in a timely manner. Opportunities are lost if interfaces are not identified and addressed in the early stages of each of the Back-End of Fuel Cycle (BEFC) phases.

The objective of this paper is to suggest a process for systematically identifying and evaluating the potential interface issues in SFM, and to recommend effective management based on the experience of Member States before losing timely resolution opportunities.

Some conclusions that can be drawn from the system integration in BEFC tasks are:

- Assuring compatibility of schedules, equipment, and acceptance criteria are key to solve interface issues.
- Record/data keeping is an important issue for each interface. Without proper records, interface issues might not be able to be addressed or conservative and costly alternative approaches might need to be developed.
- As storage periods are extended and countries plan consolidation into regional or centralized dry storage facilities, this interface issue will take on increasing importance –particularly if inspections and/or repackaging are needed to prepare fuels for long-term storage.
- Additional pro-active efforts are needed from every participating organization in the BEFC to ensure early attention to public acceptance in the siting, safety, operation, duration, oversight, and path forward. Accurate information must be provided in a user-friendly format.

The principles presented in this paper emphasize the importance of systematically identifying and managing interface issues within the BEFC. Because of the complexity of the issues and interfaces, a process is provided to help ensure exact identification of applicable interface issues and consideration of the associated issues and opportunities.

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