

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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Renewing Dry Spent Fuel Storage Certificates of Compliance and Specific Licenses

The United States (U.S.) Nuclear Regulatory Commission (NRC) regulations for storage of spent nuclear fuel (SF) permit initial storage terms of up to 40 years. Certificates of Compliance (CoCs) for SF storage system designs, or specific licenses to store SF, can then be renewed for up to 40 years. Renewal authorization requires time-limited aging analyses and aging management programs (AMPs) that demonstrate that structures, systems, and components important to safety will continue to perform their intended functions for the requested period of extended operation.

NRC staff has recently completed the renewal review for a specific license at the Calvert Cliffs Nuclear Power Plant site, and is currently reviewing renewal applications for a second specific license and two CoCs. In addition, work is underway on a revision to the staff guidance for the safety review of specific-license and CoC renewal applications. The guidance will define an acceptable method for the NRC staff to review and determine if the applicant demonstrates that the storage system, or independent spent fuel storage installation, will continue to meet the applicable regulatory requirements during the renewal duration. In addition, the guidance will provide examples of aging management programs for (1) localized corrosion and stress corrosion cracking of welded stainless steel dry storage canisters, (2) reinforced concrete structures, and (3) high burn-up fuel performance.

This paper will address the recent experience of the NRC staff in reviewing renewal applications and in developing the revised staff guidance, including discussion of example AMPs for concrete structures, and for localized corrosion and stress corrosion cracking of welded stainless steel dry storage canisters.

Country/ int. organization

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