



Generic Communications and Guidance on Spent Fuel Storage & Transportation

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Recently Completed Generic Communications and Guidance

- Interim Staff Guidance 8, Revision 3, *Burnup Credit in the Criticality Safety Analyses of PWR Spent Fuel in Transportation and Storage Casks*
- NUREG-2152 *Computational Fluid Dynamics Best Practice Guidelines for Dry Cask Applications*

Recently Completed Generic Communications and Guidance (cont.)

- IN 2012-20 “Potential Chloride-Induced Stress Corrosion Cracking of Austenitic Stainless Steel and Maintenance of Dry Cask Storage System Canisters”
- Premature Degradation of Spent Fuel Storage Cask Structures and Components from Environmental Moisture IN

Recently Completed Generic Communications and Guidance (cont.)

- Resolution of Licensing Process
Expectations for Pressurized Water Reactor Fuel Assemblies Susceptible to Top Nozzle Stress Corrosion Cracking in Dry Cask Spent Fuel Storage and Transportation, RIS 2013-XX (almost completed)

Generic Communications and Guidance under Development

- Drying Vulnerability GL
- The Use of a Demonstration Program as Confirmation of Integrity for Continued Storage of High Burnup Fuel Beyond 20 Years, ISG-24

Generic Communications and Guidance under Development (cont.)

- Stack-up Regulatory Guide
- Shielding and Radiation protection, ISG 26A
- Secondary Impact GI

Drying Vulnerability (Generic Letter)

- Vulnerability of vacuum drying systems to failure modes that would allow air ingress into the canister
- Classification of vacuum drying systems with respect to safety
- Meeting design basis fuel cladding temperatures during vacuum drying

Use of Cask Demonstration for HBU Fuel (ISG-24)

- Applicability of a cask demonstration for storage of HBU fuel beyond 20 years
 - Bunrup and cladding materials
 - Bounding peak clad temperatures during cask drying
 - Monitoring cask interior
 - Bounding fuel assembly temperature profile
 - Duration of demonstration

Cask Stack-up (Regulatory Guide)

Both NRC and Industry Continue to Make Progress (albeit slowly...):

- Draft NRC Regulatory Guide
 - Its issuance is based on acceptance of Holtec Topic Report
- Holtec Topical Report
 - Staff awaiting re-submittal of the report
- Exelon Analysis for Braidwood
 - SFST will evaluate the acceptability of the design method through a TAR from Region III

Shielding and Radiation Protection in Part 72, ISG-26A

- Purpose
 - Level of staff review effort
 - Certification or licensing conditions
 - Staff verification and review of analyses
- Format
- Tentative schedule
 - Public comments, ACRS meeting, issuance

Secondary Impact (Generic Issue)

- Gaps between fuel and canister/cask cavity result in significant amplification of g loads experienced by fuels and closure lids under hypothetical accident conditions for transport
- Possible paths for addressing
 - Spacers
 - Redesign of external impact limiters
 - Demonstrating safety with loss of fuel geometry
- Issue has been placed in the NRC's Generic Issue program



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