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General Comment

See attached file(s)

Attachments

Review of DG-1334

SUNS1 Review Complete

Template = Adm-013

E-RDS = Adm-03

Add = B. Harris (BKH4)
M. Orr (MP01)

Review of DG-1334

The method of evaluation discussion is confusing. The discussion should include a specific statement such as:

A new method is "approved by the NRC for the intended application" if it is already NRC approved for the specific plant, plus, the NRC approval is for the type of analysis being conducted and the licensee satisfies applicable terms and conditions for its use.

DG-1334 needs to address all the accident and event category errors in NEI 96-07. NEI 96-07 erroneously lists transients, floods, fires, earthquakes, other external hazards, anticipated transients without scram (ATWS), station blackout (SBO) and turbine missiles as "accidents." The current event categories are shown in SRP 15.0 Rev. 3. The NEI 96-07 position is inconsistent with the safety, design and licensing bases of all LWRs, the ASME Code, Reg. Guide 1.70, 10 CFR 50 App. A Anticipated Operational Occurrence definition and GDC 10 and 15. As shown in SRP 15.0.3 Table 1, accidents have radiation doses as their acceptance criteria. Those other events have no or significantly lower dose acceptance criteria than for accidents. Treating those other events as accidents would be non-conservative, because this implies that the less restrictive accident success/acceptance criteria could be used in assessing changes to these events. (See SRP 15.0 and ESBWR DCD Tier 1 Section 15.0 for different event categories and their associated acceptance criteria.) NEI 96-07 correctly states that these events (as documented in a UFSAR) are within the scope of 10 CFR 50.59, however, changes to their UFSAR evaluations should be assessed against their event-specific acceptance criteria, and not accident acceptance criteria.

DG-1334 and NEI 96-07 need to provide a definition with distinct criteria for an "accident of a different type." Accidents always result in a radiological consequence greater than a 10 CFR 20 allowable release limit. Therefore, for a change to create an accident of a different type, the change must be within the plant's 10 CFR 50.2 design bases criteria (e.g., within the single failure criterion), and must allow for a new failure with resulting radiological release of such safety significance (greater than the 10 CFR 20.1301(a)(1) 1 mSv (0.1 rem) dose limit) that, if the plant was being licensed for the first time, the failure would be included in the plant FSAR. Therefore, an accident of a different type must result in a new potential radioactive material release. The following definition and clarification should be added to the final regulatory guide revision.

A change that could result in an accident of a different type must (a) allow for or create a new fission product release path, (b) result in a new fission product barrier failure mode, and/or (c) create a new sequence of events that results in significant fuel cladding failures.

An accident of a different type is not applicable to an event with failures beyond the 10 CFR 50, Appendix A single failure criterion, except if the follow-on failures are a direct result of the initial failure or event.

Note; a change that only increases a radiological source term would not create an accident of a different type, but could result in an increase of a radiological consequence of an accident, which is covered by another 50.59 criterion.