



NUCLEAR ENERGY INSTITUTE

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Meeting with NRC-DSFM
July 11th, 2017

10 CFR 72.48 Implementation Guidance: Method of Evaluation

Topics

- Method of Evaluation
- Background/History
- Proposed Guidance Changes
- Summary/Path Forward



Method of Evaluation

Method of Evaluation (MOE)

There are two potential ways to change an MOE described in the ISFSI or cask FSAR, either of which must be evaluated pursuant to 10 CFR 72.48(c)(2)(viii) to determine if prior NRC approval is required:

1. Change to an element of a method already described in the governing FSAR
2. Use of another MOE not described in the governing FSAR

The second item is the topic of today's meeting



What do the Regulations Require?

- §72.48(a)(2)(ii): For a specific licensee or CoC holder to use a new or different MOE than described in the FSAR without NRC approval, that MOE must be “approved by the NRC for the intended application”
- Answering the 72.48(c)(2)(viii) question hinges on how “approved for the intended application” is defined



Where do NRC and Industry Agree?

- NRC does not generically approve MOEs without limitations for use across licenses, CoCs, or amendments within CoCs.
- Specific constraints on licensees and CoC holders using an MOE described in one FSAR on designs governed by another FSAR are appropriate
- Part 50 precedents in this area should be considered, as appropriate to ensure consistency between Part 50 and Part 72



Background/History

What is the Guidance History?

- Use of an MOE described in one power plant FSAR on a power plant described in another FSAR is permitted
- This was a topic of considerable discussion when NRC endorsement of the NEI 96-07 guidance for 50.59 was being discussed from 1999-2001
- Two key documents were produced from these discussions that support the endorsed 50.59 guidance in this area
 - One by NRC, which drove a revision to the guidance
 - One by NEI, to document subsequent discussions with the NRC
- The intent of the 72.48 guidance in NEI 96-07 Appendix B was and is to emulate the 50.59 guidance



November 2nd, 1999 Public Meeting

- Meeting Summary: ADAMS ML993260078
- NRC's position entering the meeting was that, absent a generic approval, one licensee could not use an MOE approved site-specifically for another licensee without NRC approval
- Industry argued that licensees should have the responsibility for demonstrating their use of an MOE is consistent with limitations, terms, and conditions placed on it by the MOE owner and/or the NRC through its review



November 2nd, 1999 Public Meeting

- NRC's specific concerns included:
 - NRC does not review the suitability of an MOE for all possible reactor types or applications, or all features of the MOE
 - An SER would typically only discuss the review/approval of the MOE to the extent needed to judge the application
 - Others may not be in a position to determine the overall acceptability of the MOE for other applications
 - There may be unique licensing basis considerations, elements of an MOE that were balanced in the decision, or geometry decisions
 - Examples of licensees who lacked understanding of code limitations and improperly used the MOE for an application where it was not appropriate



November 2nd, 1999 Public Meeting

- Industry's position was that such "lack of understanding" could also occur among licensees even if the MOE was generically approved
- NRC stated the potential for error is reduced when documentation for the MOE approval describes the envelope that was approved.
- NRC ultimately agreed that it may be possible for licensees to use MOEs not approved on a generic basis if suitable guidance were prepared
 - Attachment 4 to the meeting summary provides the staff views on such guidance



Subsequent Industry-NRC Discussions

- NEI maintained a running Q&A document for this discussions – last updated in April 2001
- Several questions involved what “approved for the intended application” means
- The responses consistently state that MOEs are approved in an SER for a plant’s licensing basis and considered approved by the NRC for the intended application as described in that SER and FSAR



Subsequent Industry-NRC Discussions

- One question (G.5) specifically addresses the Statements of Consideration for the 50.59 rule change
 - NEI 96-07 guidance as endorsed by NRC clarifies the SOC
 - In interpreting the SOC, the guidance (NEI 96-07) should be consulted
- Licensees qualified per Generic Letter 83-11, Supplement 1 to perform safety analyses may adopt MOEs approved by the NRC for other plants provided the MOE is “technically appropriate for the intended application”



Proposed Guidance Changes

Proposed Guidance Changes

- Section 6.8, “Departure...”
 - Clarified the respective responsibilities of cask design authority and specific licensee for the 72.48 review of an MOE
 - Recommends an approach for addressing an MOE change concurrent with a separate proposed activity (e.g., design or procedure change)
 - Editorial clarifications



Specific Licensees vs. CoC Holders

- CoC holders are cask design authority for both general and specific licenses and have 72.48 authority for MOEs described in cask FSARs
- MOEs described in FSARs for specific licenses are closer to the Part 50 model (e.g., licensee and NSSS supplier)
- Specific ISFSI licensees usually do not have access to the MOEs or training to use them, but have sole authority and responsibility for 72.48 under the specific license
- Specific licensees wishing to modify an MOE must work closely with the CoC holder/design authority in matters involving MOE changes



Proposed Guidance Changes

- Section 6.8.1, “Change to an Element of an MOE...”
 - Added guidance for evaluating a later computer code release or version
- Section 6.8.2, “New or Different MOE...” was split into four subsections to reflect the 50.59 discussions with NRC



Proposed Guidance Changes

- 6.8.2.1, “NRC Approval of Methods”
 - To be considered approved by the NRC for the intended application, the MOE must be approved in an SER or otherwise accepted by the NRC as part of the ISFSI facility’s or cask’s licensing basis
 - Methods described in the ISFSI UFSAR or the generic cask UFSAR (i.e., the current licensing basis) are considered approved by the NRC for the intended application (NEI Questions E.22 and E.23), but not generically approved for use by all ISFSI licensees or CoC holders.



Proposed Guidance Changes

- 6.8.2.2, “Statements of Consideration”
 - Adds explanation from NEI Q&A number G.5 that based on the discussions, the guidance, when endorsed, clarifies the SOC
- 6.8.2.3, Consideration for Determining if an MOE is approved for the [new] intended application
 - Not to be confused with approved for the original application that NRC reviewed



Proposed Guidance Changes

For a licensee or CoC holder to use an MOE approved under one license or CoC on another without NRC approval, certain rules apply (from 11/99 NRC meeting summary):

1. The new or different MOE must be used only by the same CoC holder/design authority as the originally approved MOE.
2. There must be a Generic Letter (GL) 83-11, Supplement 1-type qualification process for the user of the new method



Proposed Guidance Changes

3. The licensee or CoC holder is able to identify all conditions and limitations under which the MOE received NRC approval. Conditions and limitations include, among other things, the type of analysis, the manner in which the analysis was applied, the physical configuration of the ISFSI facility or cask design, and any licensing basis restrictions. The licensee or CoC holder must assure that all limitations and restrictions are applicable to the ISFSI facility or cask design in question and the MOE is then applied within all conditions and limitations. For example:



Proposed Guidance Changes

- a) An MOE that is approved for one ISFSI facility or cask design for a particular transient cannot be applied to another ISFSI facility or cask design for a different transient because it was not approved for the other transient.
- b) A licensee or CoC holder is not permitted to adopt different aspects of different approved MOEs (i.e., mix and match) because the MOE is not being applied in the manner it was approved.
- c) An MOE that is approved for a particular ISFSI facility or cask design cannot be applied to another ISFSI facility or cask design that has relevant design differences because the method was not approved for the different design configuration.



Proposed Guidance Changes

4. The licensee or CoC holder is not permitted to adopt less restrictive licensing basis analysis assumptions even if they have been approved for a different ISFSI facility or cask design.



Proposed Guidance Changes

- 6.8.2.4 “Additional Considerations” – The same as NEI 12-04, Revision 0, Section 6.8.2.1 with one editorial change



Summary/Path Forward

Summary

- 10 CFR 72 licensees and CoC holders deserve the same authority and flexibility for determining if an MOE change is a departure as Part 50 licensees
- Discussions from the 1999-2001 time frame between industry and NRC support the guidance in:
 - NEI 96-07, Revision 1 (endorsed)
 - NEI 96-07, Appendix B (endorsed)
- NEI 12-04 attempts to add clarifying guidance for licensees and CoC holders based on lessons learned since 2001, but no fundamental change to existing guidance



Path Forward

- NEI 12-04 will be revised to more clearly articulate the agreements between NRC and industry in the 1999-2001 time frame which have been used to train 50.59 and 72.48 qualified people for over a decade



Questions ?

