

**From:** Sutton, Mallecia  
**Sent:** Wednesday, June 22, 2022 2:46 PM  
**To:** George Wilson  
**Cc:** Kennedy, William; Ryan Sprengel  
**Subject:** Response to Questions Regarding Relevance of Standard Review Plan (SRP) Chapter 3 to Technology Inclusive Content of Application Project (TICAP) Guidance

Good afternoon George,

The purpose of this email is to respond to questions regarding the formatting of an application using the licensing modernization project (LMP) guidance as it relates to issues found in NUREG-800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR Edition," (i.e., the Standard Review Plan (SRP)) Chapter 3. The staff views that additional preapplication discussions on this topic would be beneficial to ensure a common understanding on where information traditionally found in SRP Chapter 3, and which is applicable to specific non-LWR designs, will be placed in an application following NEI 21-07, Revision 1 guidance.

Question 1: It is not clear where all of the SRP Chapter 3 content should go in the safety analysis report (SAR). What are the NRC's expectations for the location of this content?

NEI 21-07, Revision 1, [Technology Inclusive Guidance for Non-Light Water Reactors Safety Analysis Report Content for Applicants Utilizing NEI 18-04 Methodology](#) provides some guidance in this area as noted in questions 2 and 3 below. Specifically, Section 6.1.1, "Design Basis Hazard Levels," includes the following:

*Chapter 3 of current LWR SARs provides extensive detail on the translation of DBHLs to loads on SSCs, evaluation of those loads, and related design analyses. The calculations are not specific to an LMP-based affirmative safety case, and TICAP is not providing guidance on presenting the results of such calculations. The guidance will be provided by the NRC in ARCAP. Applicants can also refer to Chapter 3 of the Standard Review Plan (SRP) for guidance in this area. For an advanced non-LWR SAR, this material may be included in Chapter 2 or in reports external to, and appropriately referenced in, the SAR. The scope and level of detail of these calculations are design- and site-specific, but the information can be quite voluminous for LWRs. This area may present an opportunity to reduce the amount of information included directly in an advanced non-LWR SAR.*

Chapter 3 of the SRP is guidance to NRC staff reviewers for LWR applications; however, advanced non-LWR applicants may glean some useful insights into the staff's review of this information. The staff does not expect that all the information addressed in Chapter 3 of the SRP will be applicable to advanced non-LWR applicants and that some of the Chapter 3 SRP topics may be design specific.

In general, the staff views that analytical methodologies used for any of the topics addressed by Chapter 3 of the SRP (e.g., establishing ground motion response spectrum (GMRs), wind loadings, tornado loadings, etc.) should be described in TICAP Chapter 2. Design requirements

and safety classifications should be discussed in TICAP Chapters 6 and 7 depending on the safety classification of the structures, systems, and components (SSCs) and special treatments applied in the form of design requirements and the functions required to be performed by the SSCs based on the licensing basis event (LBE) analysis in Chapter 3 and the integrated plant analysis in TICAP Chapter 4. The establishment of the design requirements previously documented in Chapter 3 of LWR safety analysis reports may be located in external reports incorporated by reference, for example, in Chapter 3 of an LMP-based SAR or through appendices to Chapter 3.

Question 2: NEI 21-07 revision 1 section 6.1.1 discusses guidance for DBHLs to loads on SSCs and refers to ARCAP. When is the ARCAP guidance going to be provided?

The staff is working to issue several advanced reactor content of application project (ARCAP) interim staff guidance (ISG) documents and a TICAP draft guide for public comment in the Summer of 2022. For DBHLs, it is expected that the staff will reference the NEI 21-07 guidance above. The staff is also working to issue a white paper in the summer of 2022 related to a proposed alternative conceptual approach to seismic safety and design for advanced non-LWRs within the framework of the LMP and American Society of Civil Engineers (ASCE) 43, "Seismic Design Criteria for Structures, Systems, and Components in Nuclear Facilities." The proposed alternative approach was discussed during a workshop in 2020 (see: <https://www.nrc.gov/pmns/mtg?do=details&Code=20200453>).

Question 3: NEI 21-07 revision 1 section 6.1.1 states that applicants can refer to chapter 3 of the SRP for guidance before ARCAP guidance is available. Is there any guidance on where in the PSAR this information should be located?

In general, the PSAR and FSAR format are expected to be very similar (see response to question 1). However, based on the current state of available guidance for advanced reactor contents of applications, the NRC staff also anticipates flexibility in its expectations of the initial 10 CFR Part 50 applications for advanced non-LWRs and that its expectations will be further refined with finalization of the guidance and experience with its implementation.

Please contact me if you have additional questions.

Thanks  
Mallecia Sutton

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