



Tier 2* Designation Working Group

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Licensing Basis Progression Tier 2* Designation

FSAR

Plant –Specific
DCD

COL
FSAR

ESP
SSAR

Tier 1

Tier 2*

Tier 2

E Plans
QA
Security
Op
Programs
FFD

E Plans
Seismic
Hydrology

Tier 2* Designation Historical perspective

Tiered approach to designating the information necessary and sufficient to make a licensing decision

- SRM SECY 90-377 *excerpt at* V. TWO-TIERED APPROACH
 - The Commission agrees with the proposed two-tiered design certification rule structure. To ensure continuity and consistency in the staff's safety review efforts, decisions on what information should reside in each tier should be made in parallel with the staff's review and should be documented at the time the staff issues the Safety Evaluation Report so that the staff's position on this matter is available at the time of FDA [Final Design Approval] issuance.

Tier 2* Designation Historical perspective

Tiered approach to designating the information necessary and sufficient to make a licensing decision

- SRP 14.3 Appendix A Information On Prior Design Certification Reviews,
 - I. Background – Design Certification
 - E. Tier 2* - means the portion of the Tier 2 information, designated as such in the generic DCD, which is subject to the change process in the design certification rule. This designation expires for some Tier 2* information at fuel load.

(Note: The change control process is located in Section VIII.B.6(a) for applicants and (b) for licensees. Some of the Tier 2* designations in AP1000 DCR expires when the plant first achieves full power.)

Tier 2* Designation Historical perspective

Tiered approach to designating the information necessary and sufficient to make a licensing decision

- SRP 14.3 Appendix A Information On Prior Design Certification Reviews,
 - III. Tier 2 information
 - 2. Designation of Tier 2* Information in the DCD. Tier 2* information is that information in Tier 2 that, if considered to be changed by a combined license (COL) applicant or licensee, requires NRC approval prior to the change. The areas designated as Tier 2* by the NRC staff are listed in the FSER, and these areas should be similar for the passive designs.

Tier 2* Designation Historical perspective

Tiered approach to designating the information necessary and sufficient to make a licensing decision

- SRP 14.3 Appendix A Information On Prior Design Certification Reviews,
 - III. Tier 2 information
 - 2. Designation of Tier 2* Information in the DCD. (cont.)
 - The staff may determine that selected material in the SSAR, if considered for a change by an applicant or licensee that references the certified design, would require NRC approval prior to implementation of the change. This information is designated as Tier 2* information. Tier 2* is generally information that is not appropriate for treatment in Tier 1 because it is subject to change. Tier 2* is generally considered for areas associated with detailed structural and equipment design; design and analysis methodology for fuel and control rods; and supporting material for the DAC areas of the design....
 - The staff's rationale for the Tier 2* information in each area and the basis for the determination that a change would require prior NRC approval, should be documented in the FSER.



Tier 2* Designation Implementation difficulties identified

Implementation of Tier 2* information identified difficulties

July 2013 - Post COL Part 52 Implementation Self-Assessment
Working Group Report, Lesson Learned 1 (ML13196A403)

Executive Summary (page ii)

1. Clarity of design control document (DCD) Tier 2* information (i.e. information for which prior NRC review and approval is needed before changes can be implemented) could be enhanced.

Tier 2* Designation Implementation difficulties identified

Implementation of Tier 2* information identified difficulties

July 2013 - Post COL Part 52 Implementation Self-Assessment
Working Group Report, Lesson Learned 1 (ML13196A403)

Executive Summary (page iii)

1. Clarity of DCD Tier 2* Information

The AP-1000 DCD Tier 2* information should be reviewed to determine if ambiguity is problematic in areas of the AP-1000 DCD other than those noted by the WG. If so, then the DCD Tier 2* information for future design certification reviews and combined licenses should also be reviewed and the guidance for designation and documentation of DCD Tier 2* information should be enhanced. In addition, for the AP1000 design, specific effort should be undertaken to ensure common understanding between the NRC staff and the AP1000 licensees relative to Tier 2* information. The WG noted that the NRC staff has begun that effort for the remaining critical sections discussed in Section 3H.5 of the AP1000 DCD.

Tier 2* Designation Implementation difficulties identified

Implementation of Tier 2* information identified difficulties

- December, 2013 Nuclear Energy Institute, NEI, input received on Tier 2* Problem Statement (ML13350A604)

Attachment (page 1)

...As originally intended, the purpose of Tier 2* was to ensure that a licensee could not make changes in certain important design methodologies that pertained to areas where it is not practical to specify a high degree of design detail at the time of design certification or where applicants preferred to specify design information in Tier 2, not Tier 1, to allow the design to accommodate subsequent improvements in technology. According to the NRC, Tier 2* designations compensate for the industry's desire to limit the amount of information in Tier 1.

It was originally envisioned that there might be 3 or 4 such areas associated with fuel design and certain other design methodologies, including human factors. During the design certification review process, the scope of Tier 2* grew significantly (to 24 areas for AP1000), greatly expanding the scope of departures subject to prior NRC approval and limiting the flexibility intended by Part 52 to facilitate plant construction. In addition, ***Tier 2* was not designated precisely enough***, and this has led to a lack of clarity and conservative NRC interpretations concerning the scope of changes that require prior NRC approval via license amendment....[emphasis added]

Tier 2* Designation Working Group formulation

Tier 2* Designation Working Group comprised of:

- DARR, Division of Advanced Reactors and Rulemaking
- DCIP, Division of Construction Inspection and Operational Programs
- DE, Division of Engineering
- DNRL, Division of New Reactor Licensing
- DSEA, Division of Site Safety and Environmental Analysis
- DSRA, Division of Safety Systems and Risk Assessment
- Region II, Region 2 construction inspection personnel
- Office of the General Counsel

Tier 2* Designation Working Group objectives

Tier 2* Designation Objectives:

Develop a formal definition, criteria, and process for elevating Tier 2 information to the Tier 2* status.

- Design Certification Applicants:
 - Update NUREG 0800, Standard Review Plan to relocate identification of Tier 2* information from SRP 14.3 to an appropriate section
- Part 52 Licensees:
 - Comparison of present licensing basis to revised Tier 2* criteria

Tier 2* Designation Working Group proposed schedule

Second quarter CY 2014

- Resolution of definition for Tier 2*
- Resolution of rational, consistent and objective Tier 2* criteria

Third quarter CY 2014

- Communication – internal training development and implementation
- Communication – external stakeholder involvement

Recurring through CY 2017

- Effectiveness review during the on-going design certification documentation reviews