Public Meeting to Discuss U.S. EPR Design Certification Tier 2* Approach

Darrell Gardner
Rockville, Maryland
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Purpose and Background

Purpose

- Present closure plan for U.S. EPR FSAR Tier 2* matters
- Confirm agreement with the NRC on the Tier 2* matters path to closure approach for U.S. EPR Design Certification

Background

- October 2011 DCWG Meeting – AREVA presented Tier 2* plans and pilot FSAR mark-up
- June 20 Interface Meeting - AREVA agreed to provide a complete U.S. EPR FSAR Tier 2* matters proposal in July with a Public Meeting targeted in late August
- Draft FSAR Tier 2* markups submitted to NRC on 7/23/12 for NRC review and feedback

Tier 2*

Key Points

- **The certified design rule explicitly identifies the "matters" that are considered as Tier 2***
- **There are two kinds of Tier 2* matters**
  - VIII 6.b listed matters do not expire and require prior NRC approval for changes for life of plant
  - VIII 6.c listed matters expire upon achievement of the first full power along with an NRC finding that the acceptance criteria of the combined license have been met. Future changes may then be made by the licensee consistent with Tier 2 change controls
- **Changes to Tier 2* denoted content are processed as a licensing amendment and do not require a request for exemption**
- **The parts of Tier 2 considered as Tier 2* are explicitly marked in the U.S. EPR FSAR**

Path to Closure

- **NRC Guidance on Tier 2* Selection**
  - **Limited guidance is provided in SRP Chapter 14.3 subsections regarding topics for selection as Tier 2***
    - SRP identified topics are consistent with “generic” topics in existing certified design rules
- **Top-down approach used in the identification of initial selection of draft Tier 2* matters**
  - **follow precedents from existing certified design rules**
  - **strive for simplicity of topic descriptions**
- **Use “generic” text from existing rules for Tier 2***
  - **use VIII.B.6 standard language**
  - **Includes review of the four existing final rules for precedence**
  - **Review the ESBWR SER**
  - **Resultant list used for applicability to U.S. EPR design**
- **Reach consensus on Tier 2* matters**
- **Updated U.S. EPR FSAR Rev 4 with Tier 2* mark-ups closes this issue**
  - **Abbreviated U.S. EPR FSAR Tier 2* list on next two slides:**

Path to Closure

	Title	Chapter	Section	Section Title
6b(1)	Maximum fuel rod average burn-up	1	Table 1.6-1	Reports Referenced
		4	4.1	Summary Description
		4	4.2 (3 places)	Fuel System Design
		4	4.3.1.1	Fuel Burnup
		4	Table 4.3-1	Core Design Criteria
6b(2)	Sump Screen design criteria	6		Details in RAI 552 response
6c(1)	American Society of Mechanical Engineers Boiler & Pressure Vessel Code (ASME Code), Section III, and Code Case- 284	3	3.1.4.1.1	U.S. EPR Compliance
		3	3.2.2 (4 places)	Quality Group
		3	3.8 (34 places)	Design of Category I Structures
6c(2)	American Concrete Institute (ACI) 318, ACI 349, American National Standards Institute/American Institute of Steel Construction (ANSI/AISC)–N690	3	3.5.3 (3 places)	Barrier Design Procedures
		3	3.8 (30 places)	Codes
6c(3)	Motor-operated and power-operated valves	3	3.9.3.3 (6 places)	Pump and Valve Operability Assurance

Path to Closure

	Title	Chapter	Section	Section Title
6c(4)	Equipment seismic qualification methods and standards	3	3.10.1.1	Qualification Standards
6c(5)	Piping design acceptance criteria	1	Table 1.6-1	Reports Referenced
		3	3.6 (22 places)	Criteria Used to Define Break and Crack Location and Configuration
		3	3.9.3.5	References
6c(6)	Nuclear design criteria of fuel and reactivity control system, except burn-up limit	4	4.1.1	Principal Design Requirements
		4	4.3 (3 places)	Negative Reactivity Feedbacks (Reactivity Coefficient)
6c(7)	Instrumentation and control system design processes, methods, and standards	1	Table 1.6-1	Reports Referenced
		7	7.1.1.6.4	Independence
		7	7 (5 places)	References
6c(8)	Human factors engineering	18	18 (10 places)	References

Next Step

- Incorporate NRC feedback into draft Tier 2* mark-ups
- Include Tier 2* mark-ups in Rev 4 FSAR
- Submit U.S. EPR FSAR Rev 4 to NRC – October 2012
- Subsequent Tier 2* identification should be handled via RAI process