PMComanchePeakPEm Resource

From: Monarque, Stephen
Sent: Tuesday, August 11, 2009 8:36 AM
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Cc: Kallan, Paul; ComanchePeakCOL Resource
Subject: Comanche Peak RCOL Section 19.1 - RAI No. 26
Attachments: RAI 3287 (RAI 26).doc

The NRC staff has identified that additional information is needed to continue its review of the combined license application. The staff's request for additional information (RAI) is contained in the attachment.

The response to this RAI is due within 42 calendar days of August 11, 2009**.**

Note: If changes are needed to the safety analysis report, the NRC staff requests that the RAI response include the proposed wording changes.

thanks,

Stephen Monarque
U. S. Nuclear Regulatory Commission
NRO/DNRL/NMIP
301-415-1544

Hearing Identifier: ComanchePeak_COL_Public
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Request for Additional Information (RAI) No. 3287

RAI No. 26

8/11/2009

Comanche Peak Units 3 and 4
Luminant Generation Company, LLC.
Docket No. 52-034 and 52-035
SRP Section: 19 - Probabilistic Risk Assessment and Severe Accident Evaluation
Application Section: 19.1

QUESTIONS for PRA Licensing, Operations Support and Maintenance Branch 1 (AP1000/EPR Projects) (SPLA)

19-1

Please provide the following information related to the high winds and tornadoes risk analysis.

(a) It is stated (page 19.1-6 of FSAR Rev 0) that below design basis tornado strikes can cause four internal events accident initiators (loss of offsite power, main steam line break downstream of main steam isolation valves, loss of feedwater flow, and feedwater line break upstream of the main feedwater isolation valves). However, only loss of offsite power is discussed. Please explain why the other three accident initiators or their combined effect are not discussed.

(b) Tornado-induced accident scenarios were categorized based on the results of the vulnerability analysis into four categories, reported in Table 19.1-203. According to this categorization, the first category (tornado strikes of intensity F1) does not include loss of alternate component cooling water (CCW). However, on page 19.1-6, where plant vulnerabilities to tornado events are discussed, it is stated: "In this analysis, the following systems are assumed to be damaged for tornado strikes of intensity enhanced F-scale 1 and greater: Plant switchyard, fire suppression system and non-essential chilled water system." Since the loss of the fire suppression and the non-essential chilled water systems imply the loss of alternate CCW, it appears that the first of the four categories of Table 10.1-203 should include loss of alternate CCW. Please explain.

19-2

The staff needs additional information to clarify the basis for screening out of the risk analysis external flooding (page 19.1-7, FSAR Rev 0) and transportation and nearby facility accidents (page 19.1-8, FSAR Rev 0). Statements made in Chapter 2 of the FSAR (e.g., Subsection 2.4.2.2 for external flooding and Subsection 2.2.3.1 for transportation and nearby facility accidents) refer to insignificant impact on the safety-related components of the plant. Please provide in Chapter 19 a summary of the main arguments, derived from the analysis reported in Chapter 2, which clearly support the conclusion that external flooding and transportation and nearby facility accidents can be screened in accordance with the preliminary screening criteria of ANSI/ANS-58.21-2007, including consideration of "the features of advanced light water reactors."

19-3

Section 19.1.1.4.2, “Risk-Informed Applications,” of the FSAR states: “The PRA will be updated to reflect the risk-informed technical specifications in accordance with RG 1.174 and RG 1.177, including Initiatives 4b, [risk managed technical specifications???] RMTS, in accordance with NEI 06-09 ….and Initiative 5b, risk-informed method for control of surveillance frequencies in accordance with NEI-04-10 ….., as described in Subsection 16.1.1.2.” The staff believes that PRA upgrades, in addition to PRA updates, will be necessary so that the plant-specific PRA can be used to support risk-informed programs, such as RMTS. Since NRC approval is requested to implement RMTS at the COL application stage (i.e., before a well developed plant-specific PRA model is available and all applicable guidance requirements are met), it is necessary to develop a well defined roadmap that would be used to ensure that all requirements in the applicable guidance will be met on time for plant operation. Please provide a roadmap with specific steps and supporting information, as necessary, that addresses the following:

(1) Develop a list of potential improvements of the design certification (DC) PRA models, whose implementation will be considered before fuel load if it is necessary to meet guidance requirements;

(2) Provide for the inclusion of site-specific models (e.g., essential service water system (ESWS)), detailed design and as-built information as it becomes available and peer review recommendations;

(3) Once all necessary updates and upgrades are implemented, meet Capability Category 2 for all ASME supporting requirements except for the ones that need plant-specific operational experience;

(4) In addition, include steps for developing a list of modeling uncertainties and weaknesses as well as strategies for addressing them (e.g., through specific compensatory actions) to be considered in conjunction with the specific risk-informed programs.