

PMComanchePeakPEm Resource

From: Monarque, Stephen
Sent: Thursday, February 18, 2010 4:31 PM
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Cc: ComanchePeakCOL Resource; Magee, Michael
Subject: Comanche Peak RCOL Chapter 2.4.2 - RAI Number 139
Attachments: RAI 4309 (RAI 139).doc

The NRC staff has identified that additional information is needed to continue its review of the combined license application. The NRC staff's request for additional information (RAI) is contained in the attachment. Luminant is requested to inform the NRC staff if a conference call or public meeting is needed.

The response to this RAI is due within 35 calendar days of February 19, 2010.

Note: If changes are needed to the safety analysis report, the NRC staff requests that the RAI response include the proposed 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. 4309 COL Revision 1

RAI Number 139

2/18/2010

Comanche Peak Units 3 and 4
Luminant Generation Company, LLC.
Docket No. 52-034 and 52-035
SRP Section: 02.04.02 - Floods
Application Section: FSAR Section 2.4.2

QUESTIONS for Hydrologic Engineering Branch (RHEB)

02.04.02-2

NUREG-0800, Standard Review Plan, Section 2.4.2, 'Floods,' establishes criteria that Staff intends to use to evaluate whether an applicant meets the NRC's regulations.

By letter dated October 1, 2009, the NRC staff issued RAI ID 3664 (RAI 102) Question Number 14245 (02.04.02-1), in which the NRC staff asked "In order to determine the safety of structures, systems, and components (SSCs) with respect to floods, Luminant is requested to state explicitly in the COL FSAR the water surface elevation and associated flow rate for the design basis flood (DBF) at the site, and describe all assumptions used in determining the DBF from the flooding scenarios detailed in FSAR Sections 2.4.3 through 2.4.9. Provide a rationale and describe the process used to determine that the stated DBF is bounding conservative, with respect to all permutations of stream, local precipitation, dam failure scenarios, tsunamis, surge, seiche, and wind/wave coincidence."

The applicant responded in document CP-200901564-Log No TXNB-09067-(ML093230704) executed on November 13, 2009. The NRC staff has reviewed this response and the revisions included in FSAR Updated Tracking Report No. 4 referenced in the response, and has determined that additional information is needed in order to complete its review.

The NRC staff determined that the applicant has clarified the design basis flood elevations and causal mechanisms for the scenario that the applicant included in the safety analysis. However, the applicant has not explained in its response why this scenario, with its multiple simplifying assumptions, computations, and omission of existing and proposed upstream reservoirs, is bounding conservative with respect to all other scenarios. As an example, the Staff noted that the water elevation below Squaw Creek Dam is computed using an equation for uniform flow at the Brazos-Paluxy confluence, but there is no explanation of why this assumption of uniform flow is bounding and conservative. Other assumptions include the absence of wind setup on reservoirs included in the domino failure scenario, the selection a constant loss rate for infiltration rate in watershed runoff modeling, and dismissal of the possibility of surge and seiche flooding in the analysis. While the likelihood of these factors contributing to a design-basis flood is addressed in other RAIs (and remains unresolved after the NRC staff's review of the RAI responses), the argument for the conservative and bounding nature of the applicant's scenario incorporating all of these assumptions and computations needs to be proffered in FSAR Section 2.4.2.

In order to make its safety determinations, the NRC staff requests the applicant provide a clear description and justification of the conservatism and incorporation of the unaccounted for parameters and factors in the analysis for the determination of design basis flood.

This is supplemental RAI 2.4.2-00-S.