

PMComanchePeakPEm Resource

From: Monarque, Stephen
Sent: Tuesday, May 18, 2010 4:49 PM
To: John.Only@luminant.com; Donald.Woodlan@luminant.com; cp34-rai-luminant@mnes-us.com; Diane Yeager; Eric.Evans@luminant.com; joseph tapia; Kazuya Hayashi; Matthew.Weeks@luminant.com; MNES RAI mailbox; Russ Bywater
Cc: ComanchePeakCOL Resource; Ward, William
Subject: Comanche Peak RCOL Chapter 3 Section 3.7 - RAI Number 162
Attachments: RAI 4714 (RAI 162).docx

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 is needed.

The response to this RAI is due within 42 calendar days of May 18, 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. 4714 Revision 1

RAI number 162

5/18/2010

Comanche Peak Units 3 and 4
Luminant Generation Company, LLC.
Docket No. 52-034 and 52-035
SRP Section: 03.07.03 - Seismic Subsystem Analysis
Application Section: 3.7.3

QUESTIONS for Structural Engineering Branch 1 (AP1000/EPR Projects) (SEB1)

03.07.03-3

This is a follow-up to RAI 2883 (CP RAI #64), Question 03.07.03-1. In order to make a safety determination and complete the safety evaluation, a response to this question is needed to determine compliance with 10 CFR Part 50, Appendix A, General Design Criterion 2.

In the response to question 03.07.03-1, the applicant indicated that hydrodynamic parameters used in the ANSYS model of the ultimate heat sink (UHS) structures were calculated according to American Concrete Institute (ACI) 350.3-06. Specifically, ACI 350.3-06 was used to calculate the impulsive water weight, the convective water weight, the convective frequency, the height of the centroid of the impulsive pressure distribution, and the height of the centroid of the convective pressure distribution. However, no mention was made of the hydrodynamic pressure distributions used to calculate the demands on the concrete walls of the UHS structures. In order for the staff to complete this evaluation, the applicant is requested to describe the methodology used to determine the hydrodynamic pressure distributions on the UHS basin walls.

Reference: Luminant's response to RAI 2883 (CP RAI #64); Log # TXNB-09060; dated October 30, 2009; ML093090163.

03.07.03-4

This is a follow-up to RAI 2883 (CP RAI #64), Question 03.07.03-1. In order to make a safety determination and complete the safety evaluation, a response to this question is needed to determine compliance with 10 CFR Part 50, Appendix A, General Design Criterion 2.

In the response to question 03.07.03-1, the applicant stated that the influence of the vertical ground shaking on the on the lateral pressure on the UHS basin walls is negligible.

In order to justify this position, the applicant is requested to identify which region in the basin has the wall frequency that results in the highest associated vertical spectral acceleration. The governing frequency and associated vertical spectral acceleration should be stated.

If the applicant has determined that all such frequencies in the basin are high enough for the wall response to be considered rigid, this should be stated and the governing calculations shown.

In either case, the applicant is requested to quantify the maximum effect of neglecting this lateral pressure term.

Reference: Luminant's response to RAI 2883 (CP RAI #64); Log # TXNB-09060; dated October 30, 2009; ML093090163.