

PMComanchePeakPEm Resource

From: Monarque, Stephen
Sent: Thursday, July 08, 2010 8:56 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; Ng, Ronnie
Subject: Comanche Peak RCOL Chapter 2, Section 2.5.4 - RAI Number 170
Attachments: RAI 4841 (RAI 170).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 is needed.

The response to this RAI is due within **36** calendar days of July 8, 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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From: Monarque, Stephen

Created By: Stephen.Monarque@nrc.gov

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RAI 4841 (RAI 170).doc		34810

Options

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Request for Additional Information (RAI) No. 4841, COLA Revision 1

RAI Number 170

7/8/2010

Comanche Peak Units 3 and 4
Luminant Generation Company, LLC.
Docket No. 52-034 and 52-035

SRP Section: 02.05.04 - Stability of Subsurface Materials and Foundations
Application Section: 2.5.4

QUESTIONS for Geosciences and Geotechnical Engineering Branch 1 (RGS1)

02.05.04-22

In the response to RAI Number 22 (2929) question 2.5.4-10, the applicant has not presented any information to meet the Acceptance Criteria in Subsection 2.5.4.5 "Excavation and Backfill" of NUREG-0800, 'Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants,'. This subsection states "The extent (horizontally and vertically) of all Category I excavations, fills, and slopes are clearly shown on plot plans and profiles." Please provide the extent of fills and excavations as well as the requirements for engineered fill materials expected to be needed on the sides of the power block structures and under other safety class structures.

Luminant's Final Responses to Requests for Additional Information No. 2929; Log # TXNB-09059; dated October 28, 2009; ML093080116.

02.05.04-23

In the response to RAI Number 22 (2929) question 2.5.4-13, the applicant has indicated that some seismic category I structures are supported on fill concrete placed over engineering Layer C limestone, and seismic category I duct banks are supported on backfill materials. 10 CFR 100.23 (d) (4) requires that "Each applicant shall evaluate all siting factors and potential causes of failure, such as the physical properties of the materials underlying the site" Regulatory Guide 1.206 Section C.I.2.5.4.5, "Excavations and Backfill" states that the applicant should discuss "sources and quantities of backfill and borrow, including a description of exploration and laboratory studies and the static and dynamic engineering properties of these materials." In your response, please

1. Address the dynamic properties of fill concrete such as shear wave velocity and concrete modulus to ensure these properties equal or exceed the in-situ limestone properties.
2. Indicate if any backfill under Seismic Category I facilities will follow Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) procedures to ensure that selected backfill properties meet the requirements of the US-APWR DCD with respect to the minimum shear wave velocity and compaction. Further, for any fill

materials with dynamic properties not verified by testing results submitted for review, please indicate how the fill ultimately selected will be verified to equal or exceed the values used in stability analyses such as the bearing capacity, settlement, slope stability and lateral earth pressure.

Luminant's Final Responses to Requests for Additional Information No. 2929; Log # TXNB-09042; dated September 10, 2009; ML092820486.

02.05.04-24

In the response to RAI 22 (2929) question 2.5.4-17, the applicant indicated that static ultimate bearing capacity of 146 ksf is based on the lower bound results of the unconfined compression tests from thirty-nine samples. However, among these samples, only one sample includes shale interbeds, others are limestone. The percentage of shale interbeds in limestone Layer C may vary up to 16% based on the applicant's response to RAI question 2.5.4-1 and in accordance with 10 CFR 100.23, please justify if the ultimate bearing capacity of 146 ksf adequately reflects the presence of shale interbeds and its potential variability.

Luminant's Final Responses to Requests for Additional Information No. 2929; Log # TXNB-09059; dated October 28, 2009; ML093080116