

PMComanchePeakPEm Resource

From: Monarque, Stephen
Sent: Tuesday, October 19, 2010 5:20 PM
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Cc: ComanchePeakCOL Resource; Otto, Ngola
Subject: Comanche Peak RCOL Chapter 8, Section 8.2 - RAI Number 182
Attachments: RAI 5116 (182).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 **35** calendar days of October 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. 5116, COLA Revision 1

RAI Number 182

10/19/2010

Comanche Peak Units 3 and 4
Luminant Generation Company, LLC.
Docket No. 52-034 and 52-035
SRP Section: 08.02 - Offsite Power System
Application Section: 8.2

QUESTIONS for Electrical Engineering Branch (EEB)

08.02-29

The regulatory basis for this question is discussed in NUREG-0800, Standard Review Plan (SRP), Section 8.2 and 10 CFR 50.65(a)(1).

Chapter 8 of the applicant's Combined License Application did not discuss the cable monitoring program for underground and inaccessible cables within the scope of the maintenance rule. 10 CFR 50.65(a)(1) which states that, "Each holder of a license to operate a nuclear plant ... shall monitor the performance or condition of structures, systems, or components... in a manner sufficient to provide reasonable assurance that such structures, systems, and components... are capable of fulfilling their intended functions." Additionally, Standard Review Plan Section 8.2.III.1.L, states, "Operating experience has shown that undetected degradation of underground electric cables...could result in multiple equipment failures. Underground or inaccessible power and control cable runs that are susceptible to protracted exposure to wetted environments or submergence... should be reviewed." Guidance providing an acceptable means of meeting 10 CFR 50.65(a)(1) requirements with respect to the selection of electric cable condition monitoring can be found in Sections 3 and 4.5 of NUREG/CR-7000.

Also, as stated in COL Information Item 17.6(1):

The COL applicant must provide in its FSAR a description of the maintenance rule program , and its implementation , for monitoring the effectiveness of maintenance necessary to meet the requirements of 10 CFR 50.65.

Since the staff did not find a discussion of a cable monitoring program for underground and inaccessible cables within the scope of the maintenance rule as required by 10 CFR 50.65(a)(1), describe the monitoring program for underground and inaccessible cables (power, control and instrumentation) under the maintenance rule, and revise the FSAR to reflect this information.

08.02-30

The regulatory basis for this question is discussed in NUREG-0800, Standard Review Plan (SRP), Section 8.2.

FSAR Subsection 8.2.2.2 states that:

“The Comanche Peak generation remains stable for reasonably expected contingencies. These study cases include loss of the most heavily loaded transmission circuit connected to the plant switching station, loss of the largest capacity transmission circuit connected to the plant switching station and removal of the largest load from the system. In addition, in case of loss of the largest supply, i.e. CPNPP Units 3 and 4, the transmission system remains stable with slight voltage and frequency variation. The voltage low point is about 0.976 per unit and frequency deviation from 60 Hz is only 0.24 Hz at the lowest point. In addition, the maximum frequency decay rate does not exceed 5 Hz/second that is assumed in the reactor coolant system flow analysis in Chapter 15.” (emphasis added)

It is not clear from the applicant's statement that the stability of the grid will be studied to confirm that after a turbine trip, adequate power to the RCPs is maintained for at least three seconds as required in the transient and accident analysis in Chapter 15. Confirm that anti-motoring protective relaying for the main generator will open the generator output breaker after a time delay of at least 15 seconds, during which time the rotating generator will provide voltage support to the grid, and provide an ITAAC to verify the 15 seconds time delay associated with anti-motoring protective relaying to trip generator output breaker. Also, confirm that the analyses in Chapter 15 do not assume (credit) operation of the RCPs following the turbine trip if the initiating event is an electrical system failure.