PMComanchePeakPEm Resource

From: Monarque, Stephen
Sent: Tuesday, April 27, 2010 1:32 PM
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Cc: ComanchePeakCOL Resource; Magee, Michael
Subject: Comanche Peak RCOL Chapter 2 Section 2.32 - RAI Number 156
Attachments: RAI 4607 (RAI 156).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 April 27, 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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Request for Additional Information (RAI) No. 4607 COLA Revision 1

RAI Number 156

4/27/2010

Comanche Peak Units 3 and 4
Luminant Generation Company, LLC.
Docket No. 52-034 and 52-035
SRP Section: 02.03.02 - Local Meteorology
Application Section: Local Meteorology

QUESTIONS for Siting and Accident Conseq Branch (RSAC)

02.03.02-4

As follow-up to RAI 2.3.2-2, the staff conducted a review of the SACTI files and cooling tower calculation from ENERCON (Calculation No. TXUT-001-ER-5.3-CALC-005, Rev. 2, 3/19/2009; Plume Characteristics of Proposed Cooling Towers at Comanche Peak) provided by Luminant. The staff has found what it believes to be several inconsistencies with the calculations provided. Please note and respond to the following:

In Table 3 of the calculation, the y-values appear to have been calculated using SIN(30 degrees), in the equations at the bottom of page 16 of 34, instead of using COS(30 degrees).

In Card 26 of PREP.USR (as described on page 17 of 34 of the calculation), three representative wind directions are to be selected for the tower based on SACTI recommendations. These wind directions are suggested to be a wind at 45 degrees to the tower, a direction perpendicular to the tower, and the direction along the tower's long axis. The tower is oriented approximately 30 degrees west of north. The wind directions selected by Enercon, were 0, 60, and 150 degrees, respectively. The second and third angles are consistent with the SACTI recommendation, but the first wind direction is only oriented 30 degrees and not 45 degrees off of the tower. A wind direction of 15 degrees east of north would be oriented 45 degrees off of the tower. Please clarify why a wind direction with a 30 degree orientation off the tower was used, instead of 45 degrees.

Card 27 in PREP.USR. From Card 26 the representative wind direction designators are as follows: 1 for a 15 degree wind [diagonal], 2 for a 60 degree wind [perpendicular], and 3 for a 150 degree wind [along the towers long axis]. It appears then in Card 27, the designations should be (approximately) as follows for the 16 wind sectors (starting at north and going clockwise): 1122113311221133. This designation scheme assumes the following orientation of the wind to the tower for the 16 wind directions:

N wind - Diagonal to tower
NNE wind - Diagonal to tower
NE wind - Perpendicular to tower
ENE wind - Perpendicular to tower
E wind - Diagonal to tower
ESE wind - Diagonal to tower
SE wind - Along tower axis
SSE wind - Along tower axis
S wind - Diagonal to tower
SSW wind - Diagonal to tower
SW wind - Perpendicular to tower
WSW wind - Perpendicular to tower
W wind - Diagonal to tower
WNW wind - Diagonal to tower
NW wind - Along tower axis
NNW wind - Along tower axis

Clarify why a different set of wind direction designators were used in Calculation No. TXUT-001-ER-5.3-CALC-005, Rev. 2, 3/19/2009; Plume Characteristics of Proposed Cooling Towers at Comanche Peak.

02.03.02-5

NUREG-0800, Standard Review Plan (SRP), Chapter 2.3.2, 'Local Meteorology,' establishes criteria that the NRC staff intends to use to evaluate whether an applicant meets the NRC's regulations.

As a follow-up to RAI 2.3.2-2, please provide References 2.9 and 2.10 from the cooling tower calculation (Calculation No. TXUT-001-ER-5.3-CALC-005, Rev. 2, dated March 19, 2009; 'Plume Characteristics of Proposed Cooling Towers at Comanche Peak').