

## PMComanchePeakPEm Resource

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**From:** Monarque, Stephen  
**Sent:** Tuesday, April 27, 2010 4:33 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; Magee, Michael  
**Subject:** Comanche Peak RCOL Chapter 2 Section 2.3.5 - RAI Number 160  
**Attachments:** RAI 4609 (RAI 160).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  
**Email Number:** 895

**Mail Envelope Properties** (9C2386A0C0BC584684916F7A0482B6CA0E52FBDED4)

**Subject:** Comanche Peak RCOL Chapter 2 Section 2.3.5 - RAI Number 160  
**Sent Date:** 4/27/2010 4:32:56 PM  
**Received Date:** 4/27/2010 4:32:59 PM  
**From:** Monarque, Stephen

**Created By:** Stephen.Monarque@nrc.gov

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| RAI 4609 (RAI 160).docx | 21738       |                        |

**Options**

**Priority:** Standard

**Return Notification:** No

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**Recipients Received:**

Request for Additional Information (RAI) No. 4609 COLA Revision 1

RAI Number 160

4/27/2010

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

SRP Section: 02.03.05 - Long-Term Atmospheric Dispersion Estimates for Routine Releases  
Application Section: Long-Term Atmospheric Dispersion Estimates for Routine Releases

QUESTIONS for Siting and Accident Conseq Branch (RSAC)

02.03.05-3

Regulatory Guide 1.111, "Methods for Estimating Atmospheric Transport and Dispersion of Gaseous Effluents in Routine Releases From Light-Water-Cooled Reactors," Revision 1 (July 1977) states that if a constant mean wind direction model (such as XOQDOQ) is used, airflow characteristics in the vicinity of the site should be examined to determine the spatial and temporal variations of atmospheric transport and diffusion conditions and the applicability of single station meteorological data to represent conditions between the site and the nearest receptors and conditions out to a distance of 50 miles from the site.

Please update FSAR Section 2.3.5 to include a discussion as to why the XOQDOQ straight-line trajectory model is appropriate to use, for the Comanche Peak Nuclear Power Plant, Units 3 and 4 site, out to a distance of 50 miles to estimate the  $\chi/Q$  and  $D/Q$  values, or provide justification as to why this information is not necessary to be included in the FSAR.

02.03.05-4

NUREG-0800, Standard Review Plan (SRP), Chapter 2.3.5, 'Long-Term Atmospheric Dispersion Estimates for Routine Releases,' establishes criteria that the NRC staff intends to use to evaluate whether an applicant meets the NRC's regulations.

FSAR Section 2.3.5.2.2 states that the maximum  $\chi/Q$  and  $D/Q$  values for the evaporation pool are not bounded by the exclusion area boundary (EAB) (annual average) values of  $1.6E-05$  s/m<sup>3</sup> and  $4.0E-08$  m<sup>-2</sup>, respectively.

Justify in FSAR Section 2.3.5 why these values are acceptable to be used as site characteristics.

02.03.05-5

NUREG-0800, Standard Review Plan (SRP), Chapter 2.3.5, 'Long-Term Atmospheric Dispersion Estimates for Routine Releases,' establishes criteria that the NRC staff intends to use to evaluate whether an applicant meets the NRC's regulations.

FSAR Table 2.0-1R (sheet 3 of 12) presents the annual average D/Q values for the EAB. This table shows that the site characteristic D/Q value of  $5.5E-08 \text{ m}^{-2}$  exceeds the US-APWR site parameter value of  $4.0E-08 \text{ m}^{-2}$ .

Justify in FSAR Section 2.3.5 why these values are acceptable to be used as site characteristics.