

June 27, 2013

Mr. Rafael Flores, Senior Vice President  
and Chief Nuclear Officer  
Nuclear Engineering and Support  
Luminant Generation Company, LLC.  
P.O. Box 1002  
Glen Rose, TX 76043

SUBJECT: COMANCHE PEAK NUCLEAR POWER PLANT, UNITS 3 AND 4, COMBINED  
LICENSE APPLICATION – APPLICABILITY OF TITLE 10 OF THE *CODE OF  
FEDERAL REGULATIONS*, PART 50, APPENDIX A, CRITERION 5, GENERAL  
DESIGN CRITERIA, TO THE OFFSITE POWER SYSTEM

Dear Mr. Flores:

The purpose of this letter is to inform Luminant Generation Company, LLC. (Luminant) that General Design Criterion (GDC) 5, “Sharing of structures, systems, and components,” is applicable to the Comanche Peak Nuclear Power Plant (CPNPP), Units 3 and 4 switching station.

Title 10 of the *Code of Federal Regulations* (10 CFR), Part 50, Appendix A, GDC 5, states that “...structures, systems, and components important to safety shall not be shared among nuclear power units unless it can be shown that such sharing will not significantly impair their ability to perform their safety functions, including, in the event of an accident in one unit, an orderly shutdown and cooldown of the remaining units.” The U.S. Nuclear Regulatory Commission (NRC) staff issued two requests for additional information (RAIs) related to Luminant’s application of 10 CFR 50, GDC 5 as it relates to the CPNPP, Units 3 and 4, offsite power system.

In RAI 2576, Question 08.01-2, Luminant was requested to explain how sharing of structures, systems and components (SSCs) will not occur at CPNPP, and discuss the applicability of 10 CFR 50, Appendix A, GDC 5 to CPNPP, Units 3 and 4. Luminant’s response to RAI 2576, Question 08.01-2 dated June 30, 2009, stated, in part, that CPNPP, Units 3 and 4, are designed as a single-unit plant and onsite power systems important to safety are not shared by Units 3 and 4. The only portions of power systems shared between Units 3 and 4 are the plant switching station and the transmission system. In addition, the shared system is defined as the offsite power system, and 10 CFR 50, Appendix A, GDC 5 and Regulatory Guide 1.81, “Shared Emergency and Shutdown Electric Systems for Multi-Unit Nuclear Power Plants” are not applicable to the offsite power system.

Luminant provided a supplemental response to RAI 2576, Question 08.01-2 dated August 9, 2011, which stated, in part, that the offsite power system for CPNPP, Units 3 and 4, conforms to GDC 17, “Electric Power Systems,” which specifies requirements for the offsite power system regarding independence, capacity, and capability. Luminant concluded that while compliance

with GDC 5 is not required, there is adequate capacity to support the auxiliary loads of one unit connected to the switching station during an accident while providing for an orderly shutdown and cool down of the remaining unit. The staff reviewed the RAI response and determined that it was inadequate as Luminant stated that GDC 5 does not apply to the switching station.

In RAI 6316, Question 08.01-3, the NRC staff issued a follow up RAI for Luminant to explain how the sharing of switching station equipment will not significantly impair the ability of that equipment to provide offsite power in response to an accident in one unit and an orderly shutdown and cooldown of the remaining unit, and to demonstrate that adequate offsite power capacity exists to support both CPNPP, Units 3 and 4, during this scenario.

Luminant's response to RAI 6316, Question 08.01-3 dated May 16, 2012, stated in part that the switching station components (including the circuit breakers) for CPNPP, Units 3 and 4, are the only shared SSCs that support plant operations (for any operating scenarios, either normal or emergency). Luminant further stated that the switching station equipment is not important to safety and as such GDC 5 does not apply. Luminant, however, added that GDC 5 is met to the extent that sharing the switching station equipment will not significantly impair the ability to provide offsite power in response to an accident in one unit and will not prevent an orderly shutdown and cooldown of the remaining unit and that adequate offsite power capacity exists to support both units during this scenario. Again, the staff found the RAI response to be inadequate as Luminant stated that GDC 5 does not apply to the switching station, thus making it not subject to meeting the GDC 5 requirement.

Luminant provided a second supplemental response to RAI 2576, Question 08.01-2 dated March 4, 2013, which stated, in part, that the current design of the switching station complies with GDC 5, but the switching station does not contain any SSCs that are important to safety. The staff found this RAI response to be inadequate as Luminant stated that the switching station does not contain any SSC's that are important to safety.

Based on its review of the CPNPP, Units 3 and 4, Final Safety Analysis Report (FSAR) and Luminant's RAI responses, the NRC staff has determined that Units 3 and 4 share equipment in the switching station, but the sharing will not significantly impair the ability to provide offsite power in response to an accident in one unit and will not prevent an orderly shutdown and cooldown of the remaining unit. However, the staff does not find acceptable Luminant's stated position that GDC 5 does not apply to the switching station because it does not contain any SSCs important to safety. The switching station is the common point of interconnection where the offsite power is fed to the plant and the offsite power system is the normal preferred power source for the plant safety-related loads. The offsite power system also provides power during all modes of plant operation, including normal, emergency shutdown and postulated accident conditions, to all safety-related unit auxiliary and safety-related plant service loads that are required to be operational for orderly shutdown and cooldown. Therefore, the switching station is subject to the requirements of GDC 5 because this equipment involves sharing of SSCs important to safety.

Luminant is requested to submit a revised response to RAI 6316 that revises COL FSAR 8.2.2.1 "Applicable Criteria" in its entirety to "GDC 5 applies to the switching station." Pending receipt of this submittal, this issue will remain Open Item 8-1 as documented in the staff's safety evaluation for Chapter 8, "Electric Power."

R. Flores

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If you have any questions or comments concerning this matter, I can be reached at (301) 415-1544 or via e-mail address at [Stephen.Monarque@nrc.gov](mailto:Stephen.Monarque@nrc.gov).

Sincerely,

*/RA/*

Stephen R. Monarque, Senior Project Manager  
Licensing Branch 2  
Division of New Reactor Licensing  
Office of New Reactors

Docket Nos.: 52-034 and 52-035

cc: See next page

R. Flores

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Sincerely,

*/RA/*

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Docket Nos.: 52-034 and 52-035

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