Luminant

Rafael Flores
Senior Vice President &
Chief Nuclear Officer
rafael.flores@luminant.com

Luminant Power
P O Box 1002
6322 North FM 56
Glen Rose, TX 76043

T 254.897.5590
F 254.897.6652
C 817.559.0403

CP-201101092
Log # TXNB-11055

Ref. # 10 CFR 52

August 9, 2011

U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555
ATTN: David B. Matthews, Director
Division of New Reactor Licensing

SUBJECT: COMANCHE PEAK NUCLEAR POWER PLANT, UNITS 3 AND 4
DOCKET NUMBERS 52-034 AND 52-035
SUPPLEMENTAL RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION NO. 2576 (SECTION 8.1)

Dear Sir:

As a result of a feedback from the NRC, Luminant Generation Company LLC (Luminant) submits herein supplemental information for the response to RAI No. 2576 (CP RAI #9) for the Combined License Application for Comanche Peak Nuclear Power Plant Units 3 and 4. The supplemental information addresses sharing equipment in the plant switching station.

Should you have any questions regarding this supplemental information, please contact Don Woodlan (254-897-6887, Donald.Woodlan@luminant.com) or me.

There are no commitments in this letter.

I state under penalty of perjury that the foregoing is true and correct.

Executed on August 9, 2011.

Sincerely,

Luminant Generation Company LLC

Rafael Flores

Rafael Flores

Attachment: Supplemental Response to Request for Additional Information No. 2576 (CP RAI #9)

D090
NRO

Electronic distribution w/attachment:

Rafael.Flores@luminant.com
mlucas3@luminant.com
jeff.simmons@energyfutureholdings.com
Bill.Moore@luminant.com
Brock.Degeyter@energyfutureholdings.com
rbird1@luminant.com
Allan.Koenig@luminant.com
Timothy.Clouser@luminant.com
Ronald.Carver@luminant.com
David.Volkening@luminant.com
Bruce.Turner@luminant.com
Eric.Evans@luminant.com
Robert.Reible@luminant.com
donald.woodlan@luminant.com
John.Conly@luminant.com
JCaldwell@luminant.com
David.Beshear@txu.com
Ashley.Monts@luminant.com
Fred.Madden@luminant.com
Dennis.Buschbaum@luminant.com
Carolyn.Cosentino@luminant.com
NuBuild Licensing files
sfrantz@morganlewis.com
jrund@morganlewis.com
tmatthews@morganlewis.com
regina.borsh@dom.com
diane.aitken@dom.com
askolhek@bechtel.com
yoshinori_fujiwara@mhi.co.jp
kano_saito@mhi.co.jp
shigemitsu_suzuki@mhi.co.jp
Luminant Records Management (.pdf files only)
shinji_kawanago@mnes-us.com
masanori_onozuka@mnes-us.com
ck_paulson@mnes-us.com
joseph_tapia@mnes-us.com
russell_bywater@mnes-us.com
william_mcconaghy@mnes-us.com
mutsumi_ishida@mnes-us.com
yukako_hill@mnes-us.com
nicholas_kellenberger@mnes-us.com
ryan_sprengel@mnes-us.com
al_freitag@mnes-us.com
masaya_hoshi@mnes-us.com
rjb@nei.org
kak@nei.org
michael.takacs@nrc.gov
cp34update@certrec.com
michael.johnson@nrc.gov
David.Matthews@nrc.gov
Balwant.Singal@nrc.gov
Hossein.Hamzehee@nrc.gov
Stephen.Monarque@nrc.gov
jeff.ciocco@nrc.gov
michael.willingham@nrc.gov
john.kramer@nrc.gov
Brian.Tindell@nrc.gov
Alicia.Williamson@nrc.gov
Elmo.Collins@nrc.gov
Loren.Plisco@nrc.com
Susan.Vrahoretis@nrc.gov
Frank.Akstulewicz@nrc.gov
ComanchePeakCOL.Resource@nrc.gov

SUPPLEMENTAL RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

Comanche Peak, Units 3 and 4

Luminant Generation Company LLC

Docket Nos. 52-034 and 52-035

RAI NO.: 2576 (CP RAI #9)

SRP SECTION: 08.01 - Electric Power - Introduction

QUESTIONS for Electrical Engineering Branch (EEB)

DATE OF RAI ISSUE: 6/30/2009

QUESTION NO.: 08.01-2

The regulatory basis for this question is discussed in 10 CFR Part 50, Appendix A, General Design Criterion 5 "Sharing of Structures, Systems, and Components" and Regulatory Guide 1.81, "Shared Emergency and Shutdown Electric Systems for Multi-Unit Nuclear Power Plants," Revision 1 (January 1975), which describes the NRC staff's techniques in evaluating applications and provides guidance to applicants.

Table 8.1-1 of the US-APWR DCD indicates that 10 CFR Part 50, Appendix A, General Design Criterion (GDC) 5, "Sharing of Structures, Systems, and Components" and RG 1.81, "Shared Emergency and Shutdown Electric Systems for Multi-Unit Nuclear Power Plants," are not applicable to the US-APWR DCD.

(1) Please explain how a sharing of structures, systems and components will not occur at Comanche Peak Nuclear Power Plant (CPNPP), which, if a license is granted in this proceeding will become a four-unit plant.

(2) Discuss the applicability or non-applicability of the 10 CFR Part 50, Appendix A, GDC 5 and/or of RG 1.81 to CPNPP, Units 3 and 4.

SUPPLEMENTAL INFORMATION:

During a phone conversation about the Chapter 8 Open Items on July 14, 2011, the NRC Staff requested additional information for this response specifically addressing the sharing of equipment in the plant switching station.

GDC 5 applies to SSCs that are "important to safety." The introduction to 10 CFR 50, Appendix A, General Design Criteria for Nuclear Power Plants, defines important to safety as "...structures, systems, and components that provide reasonable assurance that the facility can be operated without undue risk to the health and safety of the public."

In December 2008, NEI submitted a position paper [email from Russ Bell (NEI) to Tom Bergman (NRC), NRO Directors Issue Resolution Process, dated December 19, 2008 (ML090060684)] regarding the

applicability of GDC 2, 4, and 5 to the offsite power system. The central theme of the paper was that the offsite power system is not important to safety and that GDC 2, 4, and 5 are not applicable to the offsite power system. In response to this paper [email from Tom Bergman (NRC) to Russ Bell (NEI), NRC response to GDC 2, 4 and 5 one-pager, dated January 23, 2009 (ML090260039)], the NRC staff stated that GDC 2 and 4 are not applicable to the offsite power system, but stated that "...GDC 5 would only apply where systems are shared among units." It is unclear in the email what the scope of the term "systems" means. Nevertheless, because GDC 2, 4, and 5 only apply to SSCs that are important to safety, the basis for concluding that GDC 2 and 4 are not applicable to offsite power system also supports a conclusion that GDC 5 is not applicable to the offsite power system.

The offsite power system for CPNPP Units 3 and 4 conforms to GDC 17, which specifies requirements for the offsite power system regarding independence, capacity, and capability. GDC 17 does not specify that it is applicable only to systems important to safety, as does GDC 5. Although Luminant concludes that compliance with GDC 5 is not required, adequate capacity exists 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.

FSAR Subsection 8.1.2.1 has been revised to reflect that switching station equipment shared between Unit 3 and 4 has the capacity and is configured such that sharing will not significantly impair the ability to provide offsite power in response to an accident in one unit and an orderly shutdown and cooldown of the remaining unit.

Impact on R-COLA

See attached marked-up FSAR Revision 2 page 8.1-1.

Impact on S-COLA

None; this response is site-specific.

Impact on DCD

None.

8.0 ELECTRIC POWER

8.1 INTRODUCTION

This section of the referenced Design Control Document (DCD) is incorporated by reference with the following departures and/or supplements.

8.1.1 General

CP COL 8.2(3) Replace the fourth paragraph in DCD Subsection 8.1.1 with the following.

Figure 8.1-1R is a simplified electrical one line diagram depicting the alternating current (ac) and direct current (dc) onsite and offsite electric power system including the site-specific switchyard.

8.1.2.1 Utility Power Grid Description

CP COL 8.2(1) Replace the paragraph in DCD Subsection 8.1.2.1 with the following.

Oncor Electric Delivery Company LLC (Oncor) is the transmission service provider (TSP) for the Comanche Peak Nuclear Power Plant (CPNPP). Oncor operates the largest distribution and transmission system in Texas, providing power to three million electric delivery points over more than 101,000 miles of distribution and 14,000 miles of transmission lines. Oncor operates in a service area of east, west, and north central Texas and serves cities that include the Dallas-Fort Worth area and surrounding cities. The Oncor grid is connected to fossil-fueled plants, combustion turbine plants and nuclear plants supplying electric energy over a transmission system consisting of various voltages up to 345 kV. Oncor is a member of Electric Reliability Council of Texas (ERCOT). ERCOT is comprised of members engaged in generation, transmission, distribution and marketing of electric energy in the state of Texas. ERCOT is the independent system operator that oversees all generation and transmission functions.

A new 345 kV switching station for CPNPP Units 3 and 4 (plant switching station) is constructed prior to fuel loading. The plant switching station is a part of the ERCOT grid and has four outgoing transmission circuits to remote substations as described in Section 8.2. In addition, the plant switching station has four independent overhead transmission tie lines, two for CPNPP Unit 3 and the other two for CPNPP Unit 4. The plant switching station has two main buses configured in a breaker and a half scheme. The switching station equipment shared between Unit 3 and 4 has the capacity and is configured such that sharing will not significantly impair the ability to provide offsite power in response to an accident in one unit and an orderly shutdown and cooldown of the remaining unit. RCOL2_08.01-2 S01