

November 2, 2007

Mr. M. R. Blevins  
Senior Vice President  
& Chief Nuclear Officer  
Luminant Power  
ATTN: Regulatory Affairs  
P. O. Box 1002  
Glen Rose, TX 76043

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION, UNITS 1 AND 2 - REQUEST FOR ADDITIONAL INFORMATION RELATED TO LICENSE AMENDMENT REQUEST ASSOCIATED WITH METHODOLOGY USED TO ESTABLISH CORE OPERATING LIMITS (TAC NOS. MD5243 AND MD5244)

Dear Mr. Blevins:

By letter to the U.S. Nuclear Regulatory Commission (NRC) dated April 10, 2007, as supplemented by letter dated August 16, 2007, TXU Generation Company LP (subsequently renamed Luminant Generation Company LLC) submitted a license amendment request for Comanche Peak Steam Electric Station, Units 1 and 2, to revise the requirements of Technical Specification (TS) 3.1, "Reactivity Control Systems," TS 3.2, "Power Distribution Limits," TS 3.3, "Instrumentation," and TS 5.6.5b, "Core Operating Limits Report (COLR)," to incorporate standard Westinghouse-developed and NRC-approved analytical methods into the lists of methodologies used to establish the core operating limits.

The NRC staff is reviewing your submittal and has determined that additional information is required to complete its review. The specific information requested is addressed in the enclosure to this letter. These questions were discussed with Mr. J. Seawright, et al., of your staff on October 26, 2007. It was agreed that you would provide a response by November 23, 2007, to this request for additional information.

M. R. Blevins

- 2 -

The NRC staff considers that timely responses to requests for additional information help ensure sufficient time is available for staff review and contribute toward the NRC's goal of efficient and effective use of staff resources. If circumstances result in the need to revise the requested response date, please contact me at (301) 415-3016.

Sincerely,

/RA/

Balwant K. Singal, Senior Project Manager  
Plant Licensing Branch IV  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket Nos. 50-445 and 50-446

Enclosure: Request for Additional Information

cc w/encl: See next page

M. R. Blevins

- 2 -

The NRC staff considers that timely responses to requests for additional information help ensure sufficient time is available for staff review and contribute toward the NRC's goal of efficient and effective use of staff resources. If circumstances result in the need to revise the requested response date, please contact me at (301) 415-3016.

Sincerely,

/RA/

Balwant K. Singal, Senior Project Manager  
Plant Licensing Branch IV  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket Nos. 50-445 and 50-446

Enclosure: Request for Additional Information

cc w/encl: See next page

DISTRIBUTION:

PUBLIC  
LPL4 R/F  
RidsAcrsAcnwMailCenter  
RidsNrrDssSrx

RidsNrrDorLpl4  
RidsNrrLAJBurkhardt  
RidsNrrPMBSingal  
RidsNrrDorLDpr

RidsOgcRp  
RidsRgn4MailCenter  
TNakanishi, NRR

**ADAMS Accession Number: ML073030003**

\*email dated

OFFICE	LPL4/PM	LPL4/LA	SRXB/BC	LPL4/BC
NAME	BSingal	JBurkhardt	GCranston*	THiltz
DATE	11/2/07	11/2/07	10/26/07	11/2/07

OFFICIAL RECORD COPY

REQUEST FOR ADDITIONAL INFORMATION  
RELATED TO LICENSE AMENDMENT REQUEST ASSOCIATED WITH  
METHODOLOGIES USED TO ESTABLISH CORE OPERATING LIMITS  
LUMINANT GENERATION COMPANY LLC  
COMANCHE PEAK STEAM ELECTRIC STATION, UNITS 1 AND 2  
DOCKET NUMBERS 50-445 AND 446

1. (Neutronic Design)  
Are you proposing any changes in the lattice physics and/or core design methods (e.g., cross-section generation, peaking factors, power distribution uncertainties, reactivity coefficients) as a result of its transition to Westinghouse methods? If so, please discuss the applicability of these methods to the projected Comanche Peak Steam Electric Station, Units 1 and 2 (CPSES), operating conditions.
2. (General)  
It is not clear which updated Final Safety Analysis Report (FSAR) Chapter 15 events are being analyzed with the new licensing basis methodology. Some events (e.g., steam generator tube rupture, Control Rod Misoperation, Boron Dilution, Rod Ejection, anticipated transient without scram) appear to be analyzed with the existing licensing methodology approved for CPSES. Please discuss which event analyses are applying the new methodology for CPSES (i.e., change relative to current) and which events are maintaining the existing methodology (i.e., no change relative to current).
3. (General)  
What are the projected equipment out-of-service options for the CPSES Unit 2 Cycle 11 (spring 2008) and Unit 1 Cycle 14 (fall 2008)? Please verify that the non-loss-of-coolant accident analyses provided support these projected equipment out-of-service options for both Units.
4. (General)  
Please verify that the methodology transition will not change the current limiting events for the FSAR Chapter 15 event categories, or that the new limiting events are appropriately analyzed for projected CPSES operation.
5. (Non-equilibrium  $F_Q(z)$ )  
Please provide the cycle-specific  $W(z)$  analysis consistent with methodology transition for CPSES Unit 2 Cycle 11 (spring 2008) which demonstrates that, under the proposed Relaxed Axial Offset Control, the  $F_Q(z)$  limit will not be violated during non-equilibrium conditions.
6. (N-16 Trips)  
Please verify that the methodology transition will continue to provide conservative trip timing for events requiring N-16 reactor trips.

7. (BEACON Core Monitoring)  
Will BEACON be credited for any reduction in assumed power distribution uncertainties? Please discuss any effects on core design margins due to the implementation of BEACON and its improved ability to assess operating margins.
8. (Loss Of Load/Turbine Trip (LOL/TT))  
Please justify that the lower initial reactor coolant system (RCS) pressure (-30 psi) the for pressurization cases (RCS and main steam system) is conservative. In addition, please verify that a conservative cycle exposure point was assumed for the analysis.
9. (LOL/TT)  
Please discuss why the Main Steam Isolation Valve closure and Loss of Condenser Vacuum events are bounded by the Turbine Trip event?
10. (Loss of Nonemergency Alternating Current (AC) Power to Station Auxiliaries)  
Section 15.2.6.1 of the CPSES FSAR states the following for this event, "This transient is more severe than the turbine trip event analyzed in Section 15.2.3. For this case, the decrease in heat removal by the secondary system is accompanied by a flow coastdown which further reduces the capacity of the primary coolant to remove heat from the core." Please justify that this event is indeed non-limiting as indicated in Reference 1 with respect to departure from nucleate boiling (DNB) and overpressure concerns.
11. (Loss of Nonemergency AC Power to Station Auxiliaries)  
Please discuss how the 1600.4 cubic feet maximum pressurizer volume was determined for this event if there was no explicit calculation performed.
12. (Locked Rotor)  
Please describe how the peak centerline temperature (PCT) was calculated for the Locked Rotor event. The NRC staff's generic review of the VIPRE code did not extend to post-critical heat flux (CHF) conditions. Please provide additional details associated with the analysis to ensure that VIPRE was applied in conservative manner where post-CHF conditions were entered.
13. (Locked Rotor)  
What was the calculated fraction of rods in DNB for the Locked Rotor event?
14. (Dropped rod cluster control assembly (RCCA), Statically Misaligned RCCA, and Single RCCA Withdrawal)  
Section 2.5.3 of Reference 1 seems to indicate that these events were analyzed; however, no calculated results are presented. Please provide the key parameter results, including DNB ratio for these events.
15. (Dropped RCCA Bank)  
For this event, Section 2.5.3 of Reference 1 states that the WCAP-11394 analysis is bounding. Please verify the applicability of the generic analysis to the projected operating conditions at CPSES.

16. (RCCA Ejection)  
Section 2.5.6 of Reference 1 states that the percentage of fuel rods entering DNB is limited to 10 percent of the fuel rods in the core based on generic analysis. Please justify the applicability of the generic analysis to the projected operating conditions at CPSES.

Reference:

1. Transition of Methods Safety Analyses (Attachment 2 to licensee letter dated August 16, 2007, TXX-07126)

Comanche Peak Steam Electric Station

cc:

Senior Resident Inspector  
U.S. Nuclear Regulatory Commission  
P.O. Box 2159  
Glen Rose, TX 76403-2159

Regional Administrator, Region IV  
U.S. Nuclear Regulatory Commission  
611 Ryan Plaza Drive, Suite 400  
Arlington, TX 76011

Mr. Fred W. Madden, Director  
Regulatory Affairs  
Luminant Generation Company LLC  
P.O. Box 1002  
Glen Rose, TX 76043

Timothy P. Matthews, Esq.  
Morgan Lewis  
1111 Pennsylvania Avenue, NW  
Washington, DC 20004

County Judge  
P.O. Box 851  
Glen Rose, TX 76043

Environmental and Natural  
Resources Policy Director  
Office of the Governor  
P.O. Box 12428  
Austin, TX 78711-3189

Mr. Richard A. Ratliff, Chief  
Bureau of Radiation Control  
Texas Department of Health  
1100 West 49th Street  
Austin, TX 78756-3189

Mr. Brian Almon  
Public Utility Commission  
William B. Travis Building  
P.O. Box 13326  
1701 North Congress Avenue  
Austin, TX 78701-3326

Ms. Susan M. Jablonski  
Office of Permitting, Remediation  
and Registration  
Texas Commission on Environmental  
Quality  
MC-122  
P.O. Box 13087  
Austin, TX 78711-3087

Mr. Anthony P. Jones  
Chief Boiler Inspector  
Texas Department of Licensing  
and Regulation  
Boiler Division  
E.O. Thompson State Office Building  
P.O. Box 12157  
Austin, TX 78711