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REF: 10CFR50.46(a)(3)(ii)

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TXX-15009

January 28, 2015

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

SUBJECT: COMANCHE PEAK NUCLEAR POWER PLANT (CPNPP)
DOCKET NOS. 50-445 AND 50-446
ECCS RE-ANALYSIS SCHEDULE

- REFERENCE:**
1. Letter Logged TXX-12146, dated October 18, 2012 from Rafael Flores of Luminant Power to the NRC regarding 50.46 Report for Thermal Conductivity Degradation and Peaking Factor Burndown.
 2. Letter Logged TXX-14058, dated April 22, 2014 from Rafael Flores of Luminant Power to the NRC regarding 50.46 Report for Significant Change in Peak Clad Temperature.
 3. WCAP-16009-P-A, "Realistic Large-Break LOCA Evaluation Methodology Using the Automated Statistical Treatment Of Uncertainty Method (ASTRUM)," January 2005.
 4. WCAP-16762-P, Revision 1, "Best-Estimate Analysis of the Large-Break Loss-of-Coolant Accident for the Comanche Peak Nuclear Power Plant Unit 1 Using the ASTRUM Methodology," March 2009.
 5. WCAP-16763-P, Revision 1, "Best-Estimate Analysis of the Large-Break Loss-of-Coolant Accident for the Comanche Peak Nuclear Power Plant Unit 2 Using the ASTRUM Methodology," March 2009.
 6. NRC ECCS Performance Safety Assessment And Audit Report, February 10, 2012 (ADAMS ML12041A078).
 7. NEI Letter, Comments on "Performance-Based Emergency Core Cooling Systems Cladding Acceptance Criteria" (Docket ID NRC-2008-0332) (Federal Register Notice 79FR16106), from Gordon Clefton of NEI to Annette Vietti-Cook of the NRC, dated August 21, 2014.

Dear Sir or Madam:

In References 1 and 2, Luminant Generation Company, LLC (Luminant Power) submitted information regarding an evaluation of cumulative changes and errors in peak clad temperature (PCT) in the Westinghouse Best Estimate Large Break Loss of Coolant Accident (LBLOCA) analysis methodology for Comanche Peak Nuclear Power Plant (CPNPP) Units 1 and 2. CPNPP currently uses the Westinghouse Automated Statistical Treatment of Uncertainty Method (ASTRUM) Large Break Loss of Coolant Accident (LBLOCA) evaluation methodology (EM) of WCAP-16009-P-A (Reference 3). The ASTRUM methodology application for CPNPP Units 1 and 2 is described in References 4 and 5, respectively.

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Luminant Power has previously provided a schedule for reanalysis of June 15, 2017, to the NRC for review and approval of a LBLOCA analysis that includes the effects of fuel thermal conductivity degradation (Reference 1). Luminant Power will include the revised heat transfer multiplier distributions, changes to grid blockage ratio and porosity, and correct application of the burst strain in the scheduled reanalysis (Reference 2). The current schedule was based, in part, on the Nuclear Regulatory Commission (NRC) efforts to revise 10CFR50.46 for performance-based emergency core cooling systems cladding acceptance criteria (Federal Register Notice 79FR16106) and Westinghouse efforts for development of an emergency core cooling system (ECCS) code that would satisfy the proposed rulemaking.

A 2012 NRC safety assessment confirmed, on a plant-specific basis, the safe operation of the U.S. commercial nuclear fleet (Reference 6). The safety assessment also outlined an appropriate set of actions to be taken that would confirm plant safety in the interim until a revised rule is implemented. Furthermore, a review of the ECCS Margin Database in the safety assessment revealed that some plants (including CPNPP Units 1 and 2) required no new analyses to satisfy the new analytical limits and should require minimal effort to demonstrate compliance with the proposed 10CFR50.46c. As such, CPNPP Units 1 and 2 would be required to demonstrate compliance no later than 24 months from effective date of rule implementation. The Nuclear Energy Institute provided significant comments on behalf of the industry on the proposed revision to 10CFR50.46 (Reference 7).

Although the cumulative changes and errors in the Units 1 and 2 peak cladding temperature (PCT) represents a significant change as defined in 10CFR50.46(a)(3)(i) since the sum of the absolute values of the changes in PCT is greater than 50°F, CPNPP Units 1 and 2 continue to comply with the requirements of 10CFR50.46 considering the adjusted LBLOCA PCT values and the manner in which they were derived (References 1 and 2). CPNPP Units 1 and 2 current assessed values for the limiting PCT are 1629 °F and 1850 °F, respectively, well below the 2200 °F criteria for 10CFR50.46.

In light of the above information, Luminant Power is revising the proposed schedule for providing a reanalysis to June 15, 2018 or 24 months from the effective date of the proposed 10CFR50.46 rule implementation, whichever occurs first.

This communication contains the following revised licensing basis commitments regarding CPNPP Units 1 and 2.

<u>Commitment No.</u>	<u>Commitment Description</u>
4496966	Luminant Power will submit to the NRC, for review and approval, a LBLOCA analysis that applies NRC-approved methods that include the effects of fuel pellet thermal conductivity by June 15, 2018 or 24 months from the effective date of the proposed 10CFR50.46 rule implementation, whichever occurs first.
4829670	Luminant Power will include the revised heat transfer multiplier distributions, changes to grid blockage ratio and porosity, and correct application of the burst strain in the scheduled reanalysis.

Should you have any questions, please contact J. D. Seawright at (254) 897-0140.

Sincerely,

Luminant Generation Company LLC

Rafael Flores

By: 

Fred W. Madden

Director, External Affairs

c - Marc L. Dapas, Region IV
Balwant K. Singal, NRR
Resident Inspectors, Comanche Peak