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CP-200700090
Log # TXX-07164

Ref. # GI 2004-02

December 3, 2007

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

**SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION
DOCKET NOS. 50-445 AND 50-446
SUPPLEMENT TO RESPONSE TO NRC GENERIC LETTER (GL) 2004-02, "POTENTIAL
IMPACT OF DEBRIS BLOCKAGE ON EMERGENCY RECIRCULATION DURING
DESIGN BASIS ACCIDENTS AT PRESSURIZED-WATER REACTORS"**

- REFERENCE:**
1. Letter Logged TXX-05047 from M. Blevins to the NRC dated March 7, 2005, providing a 90-day response to NRC Generic Letter 2004-02, "POTENTIAL IMPACT OF DEBRIS BLOCKAGE ON EMERGENCY RECIRCULATION DURING DESIGN BASIS ACCIDENTS AT PRESSURIZED-WATER REACTORS"
 2. Letter Logged TXX-05162 from M. Blevins to the NRC dated September 1, 2005, providing a response to requested information part 2 of NRC Generic Letter 2004-02, "POTENTIAL IMPACT OF DEBRIS BLOCKAGE ON EMERGENCY RECIRCULATION DURING DESIGN BASIS ACCIDENTS AT PRESSURIZED-WATER REACTORS"
 3. Letter dated November 8, 2007, from William H. Ruland, Director, Division of Safety Systems, Office of Nuclear Reactor Regulation to Mr. Anthony R. Pietrangelo, Nuclear Energy Institute (NEI) regarding, Plant-Specific requests for extension of time to complete one or more corrective actions for Generic Letter (GL) 2004-02, "POTENTIAL IMPACT OF DEBRIS BLOCKAGE ON EMERGENCY RECIRCULATION DURING DESIGN BASIS ACCIDENTS AT PRESSURIZED-WATER REACTORS" (ML0730605810)
 4. Letter Logged TXX-03130 from C. L. Terry to the NRC dated August 8, 2003, providing a response to NRC BULLETIN 2003-01, "POTENTIAL IMPACT OF DEBRIS BLOCKAGE ON EMERGENCY SUMP RECIRCULATION AT PRESSURIZED-WATER-REACTORS"

Dear Sir or Madam:

Luminant Power has recently determined that the schedule for chemical testing for support of resolution of Nuclear Regulatory Commission (NRC) Generic Letter (GL) 2004-02 has been extended from December, 2007 into the first quarter of 2008. Therefore, it will be necessary for Comanche Peak to request an extension from the NRC. Case 2 in the Reference 3 applies:

A member of the STARS (Strategic Teaming and Resource Sharing) Alliance

Callaway · Comanche Peak · Diablo Canyon · Palo Verde · South Texas Project · Wolf Creek

A116
NRR

“Case 2: Plants for which licensees have determined that testing and/or analyses will not be completed or are not likely to be completed by the end of 2007. Requests for extension under these circumstances should be submitted to the NRC as soon as the licensee believes the circumstances apply, not later than December 10, 2007. Because testing activities are scheduled for late 2007 and the first quarter of 2008, the NRC believes extensions needed in this situation will at most cover a few months. The NRC staff plans to review extension requests of this sort using the criteria of SECY-06-0078. Among other things, these criteria call for the licensee to describe how mitigative measures taken by the licensee will minimize the risk of degraded safety system functions during the extension period. In addition to these criteria, licensees requesting an extension beyond June 30, 2008, should provide a quantitative risk assessment to help support its request and to inform the staff’s review of that request.”

Luminant Power contacted the Comanche Peak NRC Project Manager on Tuesday, November 13, 2007, and advised that the Comanche Peak test schedule is now the 1st quarter of 2008.

Comanche Peak is pursuing testing via the PCI Sure Flow Strainer User’s Group (SFSUG). A special test facility at Alden has been constructed and a test protocol established with input from the NRC Staff. There have been a number of delays in the start of testing due to the number and complexity of the testing issues. At this time, we believe a realistic start date for testing has been established. Because of the time it will take to complete plant specific tests scheduled ahead of Comanche Peak, Luminant Power will not be able to begin testing until March of 2008. Because of the delays in testing and to allow sufficient time for analysis, Luminant Power requests an extension request for completion of actions associated with GL 2004-02 until June 30, 2008.

In addition to the delay in the start of testing, the reanalysis of the new strainer design to account for design modifications and plant specific refinements was impacted by the development of the test protocol. The number and complexity of GSI-191 issues motivated Comanche Peak to update the debris generation and debris transport analyses with multiple break location and transport cases to determine a bounding debris load and debris characterization that is consistent with the test methodology. Consequently, Luminant Power has recently determined that the schedule for completion of all downstream effects analysis will also be extended from December 2007 until February 2008.

Comanche Peak has the following plant-specific technical/experimental plan with milestones and schedule to address outstanding technical issues with enough margin to account for uncertainties:

- Completion of various downstream effects analyses are scheduled for January and February 2008. Revision to these analyses may also be required after completion of testing as described below.
- Additional plant-specific tests that support assumptions and corresponding conclusions contained in the GL 2004-02 evaluations for Comanche Peak Nuclear Power Plant (CPNPP) are planned to begin in March, 2008. Although the actual test runs at the vendor testing facility are expected to be completed in March, numerous additional actions are required prior to the vendor completing a final test report that meets the procurement specifications requirements, including those of 10 CFR 50, Appendix B for control of purchased services and procurement document control.
- Following receipt of the final test report from the vendor, numerous additional actions are also required to complete formal verification of design inputs, assumptions and conclusions of

calculations and evaluations conducted in response to issues identified in GL 2004-02. These activities include assessing the impact of the test results on strainer NPSH calculations, strainer bypass sampling impact on downstream effects analyses (in-vessel and ex-vessel), as well as potential impact on other Generic Letter 2004-02 corrective action evaluations. These activities also include compliance with 10 CFR 50, Appendix B requirements for design control, document control and quality assurance records.

The following mitigative measures have been or will be put in place prior to December 31, 2007:

- Plant hardware modifications, developed in response to issues identified in GL 2004-02 (as described in Reference 1), are installed in CPNPP and are actively supporting compliance with the regulatory requirements for long term cooling following a design basis loss of coolant accident. Hardware modifications include the following.
 - ECCS sumps screens were replaced with new strainers increasing the effective surface area from 200 square feet to almost 4000 square feet per emergency sump. The new strainers are contained within a one foot tall solid debris interceptor which will significantly reduce the quantity of debris which could reach the strainers. Modifications which divert water and debris from entering the recirculation pool near the strainers will be complete by December 31, 2007. The design approach is to maximize the capability of the strainer while minimizing the debris load to the extent practical.
 - The Refueling Water Storage Tank (RWST) Low-low setpoint and the RWST switchover procedure were revised to support the strainers. The Refueling Water Storage Tank to Containment Spray Isolation valves were replaced to reduce closing time for switchover from injection to recirculation. Control board instruments and controls and alarm were modified to support the setpoint change and enhance the operator interface for ECCS and spray switchover.
 - Various modifications were made to reduce recirculation water holdup volumes and to assure that blockage would not occur in critical areas such as the refueling cavity. These modifications, in combination with the RWST changes above, increase the minimum post accident flood levels from 4 feet to over 5 feet resulting in a corresponding increase in net positive suction head (NPSH) margin.
- Implementation is complete for CPNPP plant administrative procedures and processes to support the GL 2004-02 hardware modifications and revised operating practices.
- Interim compensatory measures implemented at CPNPP in accordance with NRC Bulletin 2003-01, as described in Reference 4, remain in effect to minimize interim risks associated with post-accident debris blockage while GL 2004-02 evaluations are being completed. In accordance with NRC Bulletin 2003-01, these measures will remain in place at a minimum until all evaluations and corrective actions for GL 2004-02 are complete.

This letter contains three revised licensing commitments regarding CPNPP Units 1 and 2.

	<u>Description of Commitment</u>
27330 (revised)	In response to the request for information in Part 1 of Generic Letter 2004-02, CPNPP has <i>substantially completed</i> an analysis of the

susceptibility of the ECCS and CSS recirculation functions for CPNPP Units 1 and 2. The methodology used will conform to the intent of NEI 04-07, "Pressurized Water Reactor Sump Performance Evaluation Methodology." The analyses when *fully* completed will provide the basis to show compliance with the applicable regulatory requirements including 10 CFR 50.46 and 10 CFR 50 Appendix A, General Design Criteria 35 and 38. *The final analysis is scheduled to be completed by the June 30, 2008.*

27369
(revised) The Emergency Core Cooling System (ECCS) and Containment Spray System (CSS) recirculation functions under debris loading conditions at Comanche Peak Nuclear Power Plant (CPNPP) Units 1 and 2 will be in compliance with the regulatory requirements listed in the Applicable Regulatory Requirements section of Generic Letter 2004-02 [Ref. 1] by June 30, 2008.

27370
(revised) As a result of analyses, testing, and design evaluations not being fully completed, an update to this portion of the response (modifications and maintenance actions) will be provided no later than February 29, 2008.

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

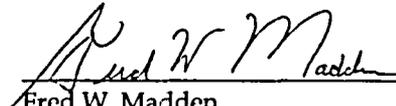
I state under penalty of perjury that the foregoing is true and correct.

Executed on December 3, 2007.

Sincerely,

Luminant Generation Company LLC

Mike Blevins

By: 
Fred W. Madden
Director, Oversight & Regulatory Affairs

c - E. E. Collins, Region IV
B. K. Singal, NRR
Resident Inspectors, Comanche Peak