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August 3, 2007

Mr. James E. Dyer
Director, Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, DC 20555-0001

SUBJECT: Comanche Peak Steam Electric Station (CPSES) Docket No. 50-446
Mitigation of Alloy 82/182 Pressurizer Butt Welds in 2008

REFERENCE:

- (1) TXU Power letter, logged TXX-07040, "Inspection and Mitigation of Alloy 82/182 Pressurizer Butt Welds," from Mike Blevins to the NRC dated February 20, 2007
- (2) Letter from J. E. Dyer (U. S. NRC) to TXU Power, "Confirmatory Action Letter Comanche Peak Steam Electric Station, Units 1 and 2 (TAC Nos. MD4143 and MD 4144)" dated March 20, 2007
- (3) Electric Power Research Institute Final Report, "Advanced FEA Evaluation of Growth of Postulated Circumferential PWSCC Flaws in Pressurizer Nozzle Dissimilar Metal Welds, (MRP-216): Evaluations Specific to Nine Subject Plants," EPRI, Palo Alto, CA: 2007. 1015383 dated July 31, 2007
- (4) Nuclear Energy Institute Letter to J. E. Dyer, Submittal of the EPRI Advanced Finite Element Analysis Final Report, dated August 1, 2007

Dear Sir:

In the Reference 1 submittal, TXU Generation Company, LP (Luminant Power) provided the plans and schedule for the mitigation of pressurizer Alloy 82/182 butt welds for Comanche Peak Steam Electric Station (CPSES) Units 1 and 2. In that submittal Luminant Power stated that, based on the current refueling outage schedule, CPSES Unit 2 would complete the mitigation action in the Spring of 2008, i.e., beyond the industry-sponsored Materials Reliability Program MRP-139 implementation deadline of December 31, 2007.

Reference 1 also provided regulatory commitments regarding the CPSES Unit 2 schedule for mitigation actions, enhanced Reactor Coolant System (RCS) leakage monitoring, and inspection reporting requirements. Also, specific to CPSES Unit 2, a commitment was made to adopt contingency plans to shut down by December 31, 2007 to perform weld overlays if technical information, being developed by the EPRI through advanced finite element analyses, does not provide reasonable assurance to the NRC that primary water stress corrosion cracking (PWSCC) conditions will remain stable and not lead to rupture without significant time from the onset of detectable leakage. These regulatory commitments were confirmed in the Reference 2 Confirmatory Action Letter (CAL).

EPRI's advanced finite element analysis, Reference 3, was recently completed and submitted by Reference 4. The analysis, which is applicable to CPSES Unit 2, assumed the existence of large circumferential cracks in all the analyzed locations. This assumption is very conservative considering

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field inspections and experience which has shown a relatively low number of PWSCC indications in these components. With this conservatism, the analysis concluded that there is significant time for crack growth between the onset of detectable leakage and development of critical flaw size.

This letter confirms that the Reference (3) EPRI Advanced Finite Element Analysis report bounds the CPSES Unit 2 pressurizer Alloy 82/182 welded pipe / nozzle components. Luminant Power has reviewed the report and verified that the input addresses CPSES Unit 2 weld configurations and loads, that the analysis and conclusions are applicable to CPSES Unit 2 design, and that all welds representative of CPSES Unit 2 are adequately addressed by the crack growth analyses and associated sensitivity cases. Finally, the analytical results applicable to CPSES Unit 2 satisfy the leakage evaluation criteria presented in the report.

Therefore, Luminant Power concludes the analytical results presented in Reference 3, and current plant enhanced leakage monitoring program, provide a reasonable and adequate basis for performing mitigation or inspection activities during the scheduled refueling outage in spring of 2008 as committed to in Reference 1, after which time CPSES Unit 2 will fully satisfy the MRP-139 inspection/mitigation requirements for pressurizer Alloy 82/182 components.

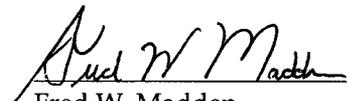
If you have any questions concerning this submittal, please contact Jack Hicks at (254)897-6725.

Sincerely,

TXU Generation Company LP

By: TXU Generation Management Company LLC,
Its General Partner

Mike Blevins

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

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B. K. Singal, NRR
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Resident Inspectors, CPSES