TXU Power

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Ref: #10CFR50.54(f)

CPSES-200600627
Log # TXX-06062

March 31, 2006

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

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION (CPSES)
DOCKET NOS. 50-445 AND 50-446
UPDATED 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"

REF:
1. Letter Logged TXX-05162 from M. Blevins to the NRC dated September 1, 2005, "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"

2. NRC letter from M. Thadani (NRC) to M. Blevins dated February 9, 2006, Requesting Additional Information Re: Response to Generic Letter 2004-02

3. NEI Letter from Anthony R. Pietrangelo (NEI) to Dr. Brian Sheron (NRC) dated February 28, 2006, Regarding NRC Requests for Additional Information to PWR Licensees Regarding Responses to Generic Letter 2004-02

4. NRC Letter from Dr. Brian Sheron (NRC) to Anthony R. Pietrangelo (NEI) dated March 3, 2006, Responding to the NEI letter regarding NRC Requests for Additional Information to PWR Licensees Regarding Responses to Generic Letter 2004-02

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Gentlemen:

The US Nuclear Regulatory Commission (NRC) issued Generic Letter 2004-02 on September 13, 2004 to 1) request that addressees perform an evaluation of the emergency core cooling system (ECCS) and containment spray system (CSS) recirculation functions in light of the information provided in the generic letter and, if appropriate, take additional actions to ensure system function, and 2) require addressees to provide the NRC a written response in accordance with 10CFR50.54(f).

Additionally the NRC requested that addressees submit information specified in part 2 of the generic letter to the NRC. The request was based on identified potential susceptibility of the pressurized water reactor (PWR) recirculation sump screens to debris blockage during design basis accidents requiring recirculation operation of ECCS or CSS and on the potential for additional adverse effects due to debris blockage of flow paths necessary for ECCS and CSS recirculation and containment drainage. Reference 1 provided the available information requested in part 2 of the generic letter as of September 1, 2005 and committed to update the information in the first quarter of 2006.

Subsequently, the NRC issued a request for additional information, Reference 2 (RAI) regarding the information provided in Reference 1. These RAIs cover a broad range of topics and are intended to support the NRC staff's ongoing review of industry activities to resolve Generic Safety Issue 191. Responses to the RAIs were requested within 60 days of the date of the letter transmitting the information requests. Subsequently, NEI requested (Reference 3) NRC consideration and acceptance of an alternative set of actions and schedule.

The NRC responded to the NEI request on March 3, 2006 via Reference 4 and agreed to the proposed alternative actions and schedule. The NRC agreed that for units completing their outage to incorporate strainer modifications in 2006, information needed to fully address GL 2004-02 will be provided to the staff by December 31, 2006. The NRC further agreed that for units installing strainers after 2006, information needed to fully address GL 2004-02 will be provided to the staff within 90 days of outage completion but not later than December 31, 2007.

TXU Generation Company, LP (TXU Power) is providing an update to the information that was submitted per Reference 1 and is revising commitment 27370 provided in Reference 1. The following information is being provided in accordance with 10CFR50.54(f).

Updates:

NRC Requested Information 2(a):

[Provide] Confirmation that the ECCS and CSS recirculation functions under debris loading conditions are or will be in compliance with the regulatory requirements listed in the Applicable Regulatory Requirements section of this generic letter. This submittal should address the configuration of the plant that will exist once all modifications required for regulatory compliance have been made and this licensing basis has been updated to reflect the results of the analysis described above.

Update to CPSES Response 2(a):

Activities are proceeding as described in Ref.1 with two changes.

1) In lieu of modifications to and replacement of Min-K insulation under pipe whip restraints, a sample of the welded, stainless steel encapsulated, high efficiency insulation was obtained and is undergoing structural analysis and comparison to insulation types that have been tested. A Zone of Influence (ZOI) based on this comparison will be used in a revision to the debris generation analysis.
2) As an alternative to the replacement of the containment spray chemical additive NaOH with Tri-sodium phosphate (TSP), CPSES is evaluating a reduction in the quantity of NaOH. A license amendment request was submitted in December 2005 to change Technical Specifications to allow either of these design options.

Design activities for the new sump strainers are in progress. A prototype has been built and tested in a flume with the conservative debris loads described in Ref.1. In addition, manufactured chemical byproducts based on the Westinghouse Owner's Group methodology were added to the debris loads. CPSES does not utilize Calcium Silicate or any other insulation which reacts with TSP, and exposed bare concrete is minimal. Therefore, only aluminum byproducts were used in the strainer testing. Bypass testing was also included. The testing was conducted March 6, 7, 8, and 9, 2006. A member of the NRC staff witnessed the testing on March 8. A range of tests was performed from very low fiber (latent fiber only), to thin bed, to thick bed. Because CPSES is a low fiber reflective metal insulation (RMI) plant, the thick bed test was beyond the design basis; however, the strainer head loss was lower than for the thin bed case. All tests included a very high particulate debris load. In each test, debris was introduced at (i.e. within 3 feet of) the strainer. During each test, continuous mixing of the flume upstream of the debris injection point was provided by overhead nozzles. The analysis of the bypass testing samples and the formal test report have not yet been completed; however, preliminary data and observations are very positive with respect to strainer performance.

NRC Requested Information 2(b):

[Provide] A general description of and implementation schedule for all corrective actions, including any plant modifications, that you identified while responding to this generic letter. Efforts to implement the identified actions should be initiated no later than the first refueling outage starting after April 1, 2006. All actions should be completed by December 31, 2007. Provide justification for not implementing the identified actions during the first refueling outage starting after April 1, 2006. If all corrective actions will not be completed by December 31, 2007, describe how the regulatory requirements discussed in the Applicable Regulatory Requirements section will be met until the corrective actions are completed.

CPSES Response 2(b):

Activities are proceeding as described in Ref.1 with the exception of some intermediate estimated completion dates (ECDs). The completion of these activities will support the update and response to RAIs for Unit 2 scheduled by the end of 2006.

NRC Requested Information 2(c):

[Provide] A description of the methodology that was used to perform the analysis of the susceptibility of the ECCS and CSS recirculation functions to the adverse effects of post-accident debris blockage and operation with debris-laden fluids. The submittal may reference a guidance document (e.g., Regulatory Guide 1.82, Rev. 3, industry guidance) or other methodology previously submitted to the NRC. (The submittal may also reference the response to Item 1 of the Requested Information described above. The documents to be submitted or referenced should include the results of any supporting containment walkdown surveillance performed to identify potential debris sources and other pertinent containment characteristics.)

CPSES Response 2(c):
Due to range and complexity of issues with respect to downstream and chemical effects, testing and analysis to support the update and revision of the analyses described in Ref. 1 to reflect the final CPSES design will not be completed by the end of the second quarter of 2006 as projected in Ref.1. We expect these to be completed to support the update and response to RAIs for Unit 2 scheduled by the end of 2006.

NRC Requested Information 2(d), 2(e), 2(f):
At this time, there are no updates to the NRC requested information in 2(d), 2(e), or 2(f) other than ones described by the above updates.

This letter contains one revised licensing commitment regarding CPSES Units 1 and 2.

	Description of Commitment
27370 (Revised)	As a result of analyses, testing, and design evaluations not being fully completed, an update to this response (modifications and maintenance actions) will be provided no later than *December 31, 2006 for Unit 2 and 90 days after completion of the Unit 1 refueling outage in the Spring of 2007.*

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 March 31, 2006.

Sincerely,

TXU Generation Company LP

By: TXU Generation Management Company LLC
Its General Partner

Mike Blevins

By: Fred W. Madden
Director, Regulatory Affairs

JDS

c - B. S. Mallett, Region IV
M. C. Thadani, NRR
Resident Inspectors, CPSES