Tennessee Valley Authority, Post Office Box 2000, Decatur, Alabama 35609-2000

July 14, 2009

TVA-BFN-TS-418 10 CFR 50.90

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

In the Matter of) Docket Nos. 50-260
Tennessee Valley Authority)

BROWNS FERRY NUCLEAR PLANT (BFN) – UNIT 2 – TECHNICAL SPECIFICATIONS (TS) CHANGE TS-418 – EXTENDED POWER UPRATE (EPU) – UNIT 2 STEAM DRYER ANALYSES

By letter dated June 25, 2004 (ADAMS Accession No. ML041840301), TVA submitted the license amendment application to NRC for the EPU operation of BFN Unit 2. The proposed amendment would change the operating license to increase the maximum authorized core thermal power level by approximately 14 percent to 3952 megawatts.

As discussed in the letter dated February 18, 2009 (ML090510174), TVA identified a technical issue associated with signal filtering which affected only Unit 2 and would delay the completion of the Unit 2 stress analysis. At that time, TVA requested that priority be placed on the Unit 1 EPU review. Subsequently, by letter dated April 1, 2009 (ML090130718), the NRC staff notified TVA of the suspension of the review for Unit 2 EPU until the submittal of analyses demonstrating acceptable stresses on the Unit 2 steam dryer.

TVA has revised the Unit 2 steam dryer stress analysis to address this issue. The revised steam dryer stress analysis includes the following changes:

- At the recirculation pump vane passing frequencies, the main steam line strain gage signals were truncated rather than applying an exclusion filter since this frequency range corresponds to the safety relief valve (SRV) excitation frequency. This change addresses the technical issue with filtering in the SRV resonance range as discussed in the February 18, 2009 submittal.

- Incorporated the revised bias and uncertainty frequency intervals requested by RAI EMCB.204/168 (see the response to RAI EMCB.204/168 in the submittal dated February 18, 2009).

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- Incorporated the results of the steam dryer support beam analysis as Appendix A to CDI Report No. 09-13P.
- Removed credit for low flow noise removal in determining the steam dryer stress results.
- Included a modification to the steam dryer to add a half-pipe reinforcement to the steam dams. The modification is illustrated in Figure 2c of CDI Report No. 09-13P.
- Included minor revisions to the finite element model that reflect changes designed to aid in the constructability of the planned modifications.
- Included disposition of a limited number of welds in accordance with the ASME code Table NG-3352-1 as described in Section 4.4 of CDI Report No. 09-13P.

The Unit 2 results based on the above changes indicate a minimum alternating stress ratio (SR-a) with frequency shifts and no credit for low flow noise removal of SR-a = 3.20 at current licensed thermal power (CLTP) and SR-a = 2.18 at EPU with bump-up factors applied.

TVA anticipates performing the remaining modifications to the Unit 2 steam dryer during the next refueling outage scheduled for Spring 2011. In order to provide lead time for the procurement and fabrication of steam dryer components, TVA requests that NRC complete the review and approval of the Unit 2 EPU license amendment by March 2010.

The revised stress analysis is provided in Enclosure 1, CDI Report No. 09-13P, "Stress Assessment of Browns Ferry Nuclear Unit 2 Steam Dryer with Steam Dam, Outer Hood and Tie-Bar Reinforcements." Accompanying reports are provided in Enclosure 2, CDI Report No. 08-05P, "Acoustic and Low Frequency Hydrodynamic Loads at CLTP Power Level on Browns Ferry Nuclear Unit 2 Steam Dryer to 250 Hz," and Enclosure 3, CDI Technical Note No. 08-13P, "Limit Curve Analysis with ACM Rev. 4 for Power Ascension at Browns Ferry Nuclear Unit 2."

Enclosures 1, 2, and 3 contain information that Continuum Dynamics, Inc. (CDI) considers to be proprietary in nature and subsequently, pursuant to 10 CFR 2.390(a)(4), CDI requests that such information be withheld from public disclosure. Enclosure 7 provides an affidavit from CDI supporting this request. Enclosures 4, 5, and 6 contain the redacted versions of the proprietary enclosures with the CDI proprietary material removed, which are suitable for public disclosure.

TVA has determined that the additional information provided by this letter does not affect the no significant hazards considerations associated with the proposed TS changes. The proposed TS change still qualifies for a categorical exclusion from environmental review pursuant to the provisions of 10 CFR 51.22(c)(9).

No new regulatory commitments are made in this submittal. If you have any questions regarding this letter, please contact J. D. Wolcott at (256) 729-2495.

I declare under penalty of perjury that the foregoing is true and correct. Executed on this 14th day of July, 2009.

Sincerely,

R. G. West
Site Vice President

Enclosures:

1. CDI Report No. 09-13P, "Stress Assessment of Browns Ferry Nuclear Unit 2 Steam Dryer with Steam Dam, Outer Hood and Tie-Bar Reinforcements," Revision 0 (Proprietary Version)
2. CDI Report No. 08-05P, "Acoustic and Low Frequency Hydrodynamic Loads at CLTP Power Level on Browns Ferry Nuclear Unit 2 Steam Dryer to 250 Hz," Revision 4 (Proprietary Version)
3. CDI Technical Note No. 08-13P, "Limit Curve Analysis with ACM Rev. 4 for Power Ascension at Browns Ferry Nuclear Unit 2," Revision 1 (Proprietary Version)
4. CDI Report No. 09-13NP, "Stress Assessment of Browns Ferry Nuclear Unit 2 Steam Dryer with Steam Dam, Outer Hood and Tie-Bar Reinforcements," Revision 0 (Non-proprietary Version)
5. CDI Report No. 08-05NP, "Acoustic and Low Frequency Hydrodynamic Loads at CLTP Power Level on Browns Ferry Nuclear Unit 2 Steam Dryer to 250 Hz," Revision 4 (Non-proprietary Version)
6. CDI Technical Note No. 08-13NP, "Limit Curve Analysis with ACM Rev. 4 for Power Ascension at Browns Ferry Nuclear Unit 2," Revision 1 (Non-proprietary Version)
7. CDI Affidavit

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