April 15, 2005

TVA-BFN-TS-427

10 CFR 50.90

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Mail Stop: OWFN P1-35
Washington, D.C. 20555-0001

Gentlemen:

In the Matter of) Docket No. 50-259
Tennessee Valley Authority)

BROWNS FERRY NUCLEAR PLANT (BFN) - UNIT 1 – TECHNICAL SPECIFICATIONS (TS) CHANGE 427 – RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION REGARDING DELETION OF THE LOW PRESSURE COOLANT INJECTION MOTOR-GENERATOR SETS (TAC NO. MC3822)

This letter provides TVA's responses to the NRC request for additional information (Reference 1) regarding proposed Technical Specification (TS) 427.

On July 8, 2004 (Reference 2), TVA requested a TS change (TS 427) to incorporate the necessary TS revisions for the removal of the requirement to maintain an automatic transfer capability for the power supply to the Low Pressure Coolant Injection (LPCI) inboard injection and recirculation pump discharge valves. NRC requested additional information to support the review of the submittal. The NRC requests and TVA's responses are enclosed.

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

If you have any questions about this submittal, please contact me at (256) 729-2636.

Sincerely,

Original signed by:

T.E. Abney
Manager of Licensing
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References:

1. NRC letter, M.H. Chernoff to K.E. Singer, dated March 28, 2005, "Browns Ferry Nuclear Plant, Unit 1 - Request for Additional Information Regarding Technical Specification Change Request (TS-427) Deletion of Low Pressure Coolant Injection Motor-Generator Sets (TAC No. MC3822).

2. TVA letter, T.E. Abney to NRC, dated July 8, 2004, "Browns Ferry Nuclear Plant (BFN) - Unit 1 – Technical Specifications (TS) Change 427 – Deletion of the Low Pressure Coolant Injection Motor-Generator Sets".

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RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION
BROWNS FERRY NUCLEAR PLANT, UNIT 1
TECHNICAL SPECIFICATION CHANGE REQUEST (TS 427)
DELETION OF LPCI MOTOR-GENERATOR SETS

NRC REQUEST

1. "Table 2 on page E1-16 of Enclosure 1 to the "Technical Specifications (TS) Change Request", provides the number of Emergency Core Cooling Systems (ECCS) (such as High Pressure Coolant Injection, Automatic Depressurization System (ADS), Low Pressure Core Spray (LPCS) and Low Pressure Coolant Injection (LPCI) actually available before the proposed change, and the number of systems available after the proposed change for the Recirculation Suction Line Break Loss of Coolant Accident (LOCA) concurrent with a single-failure. It is not clear how the number of ECCS available (such as 1LPCS, 3LPCI) before the change, and after the change have been determined for each single-failure case. Please discuss how the number of ECCS available have been determined."

TVA RESPONSE

The ECCS equipment available following the postulated pipe break and single failure were determined by performing a detailed single failure analysis based on the physical configuration of the ECCS. The analysis started with the identification of ECCS equipment available prior to the postulated break. Then, each of the postulated break locations was evaluated. (Note: Break location plays a part in the analysis because, the recirculation pump discharge pipe break results in the direct loss of a LPCI loop, whereas recirculation pump suction pipe breaks do not result in the direct loss of any ECCS pump capability). A loss of offsite power was also postulated to occur.

One active single failure within the plant is postulated to occur concurrent with the pipe break. The single failure was determined based on ensuring that it results in the largest amount of equipment being lost. (For example, if two LPCI pumps (one loop) were lost as a result of the break location, a Diesel

Generator supplying power to another pump in the opposite (unbroken) recirculation loop was selected as the single failure. This resulted in the largest amount of equipment lost due to the single failure). This analytical approach resulted in the identification of the minimum equipment remaining available for postulated break mitigation.

NRC REQUEST

2. "Table 3 on page E1-17 of Enclosure 1 to the "Technical Specifications (TS) Change Request", provides the number of ECCS (such as ADS, 1LPCS, 1LPCI) actually available before the proposed change, and the number of systems available after the proposed change for the Recirculation Discharge Line Break LOCA concurrent with a single-failure. It is not clear how the number of ECCS available before the change, and after the change have been determined for each single-failure case. Please discuss how the number of ECCS available have been determined."

TVA RESPONSE

Same as the response to NRC Request 1, above.

NRC REQUEST

3. "Please confirm that the implementation of the subject TS change will not adversely impact the loading of the emergency diesel generator sets under LOCA and Loss Of Offsite Power (LOOP) operating conditions."

TVA RESPONSE

The loads from RMOV Boards 1D and 1E will be relocated to RMOV Boards 1A and 1B respectively. Figures 1 and 4 of TS 427 show that the normal and alternate feeds to RMOV Boards 1A and 1B are the same as RMOV Boards 1D and 1E, respectively. Therefore, the design change will not impact the loading of the diesel generators.