



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

March 6, 2012

10 CFR 21

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

Browns Ferry Nuclear Plant, Units 1, 2, and 3  
Facility Operating License Nos. DPR-33, DPR-52, and DPR-68  
NRC Docket Nos. 50-259, 50-260, and 50-296

Subject: 10 CFR 21 Interim Report - Cracks in Residual Heat Removal Pump  
Motor Stator Frames

The Tennessee Valley Authority (TVA) recently identified the existence of cracks in the pump motor stator frames for the Residual Heat Removal (RHR) pump motors in use at Browns Ferry Nuclear Plant, Units 1, 2, and 3. Corrective Action Program documents were written to document the cracks on the recently removed pump motor stator frames and to require performance of an engineering evaluation of the condition.

On January 6, 2012, TVA personnel concluded that cracking occurring in the RHR pump motor stator frames could constitute a possible reportable condition pursuant to 10 CFR 21, "Reporting of Defects and Noncompliance," and, as such, required additional evaluation. TVA is in the process of performing this additional evaluation. However, this evaluation is not expected to be complete until May 31, 2012. Pursuant to the reporting requirements of 10 CFR 21.21(a)(2), if the evaluation of the deviation or failure to comply potentially associated with a substantial safety hazard cannot be completed within 60 days (i.e., by March 6, 2012), an interim report must be submitted to the NRC. The enclosure to this letter provides information required by 10 CFR 21.21(a)(2) for the interim report of this condition.

There are no new regulatory commitments contained in this letter. Should you have any questions concerning this submittal, please contact J. E. Emens, Jr., Nuclear Site Licensing Manager, at (256) 729-2636.

Respectfully,

K. J. Polson  
Vice President

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IE19  
NRR

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Enclosure: 10 CFR 21 Interim Report - Cracks in Residual Heat Removal Pump Motor  
Stator Frames

cc (w/ Enclosure):

NRC Regional Administrator - Region II  
NRC Senior Resident Inspector - Browns Ferry Nuclear Plant

## ENCLOSURE

### 10 CFR 21 Interim Report - Cracks in Residual Heat Removal Pump Motor Stator Frames

#### Name and Address of the Individual Making the Interim Report

Mr. K. J. Polson  
Vice-President  
Browns Ferry Nuclear Plant  
Tennessee Valley Authority  
Post Office Box 2000  
Decatur, Alabama 35609-2000

#### Description of the Deviation or Failure to Comply that is being Evaluated

There are 12 Residual Heat Removal (RHR) pump motor stator lower frame supports installed in Browns Ferry Nuclear Plant (BFN), Units 1, 2 and 3. Cracks were recently discovered in three of the nine General Electric RHR pump motor stator lower frame supports that were installed in BFN, Units 1, 2 and 3. The remaining three RHR pump motor stator lower frame supports were provided by a different vendor. The three RHR pump motor stator lower frame supports with the identified cracks are currently located at the Tennessee Valley Authority (TVA) Power Service Shop. These supports, when installed on the BFN units, are located on one of four sides of the lower section of the RHR pump motor stator frame, behind an air ventilation outlet. The other three sides of the lower section of the RHR pump motor stator frame are supported by a solid casting with no openings for ventilation. The serial numbers and previous installed location of the three RHR pump motor stator frames with identified cracks are as follows.

Serial Number	Previous Installed Location
CEJ326010	BFN 3D RHR position
EEJ521001	BFN 2C RHR position
FEJ604001	BFN 1C RHR position

#### Evaluation Status

General Electric - Hitachi has provided an assessment of this condition and concluded that a reportable condition within the context of 10 CFR 21, "Reporting of Defects and Noncompliance," did not exist. To validate this conclusion, TVA has sent a section of the 1C RHR pump motor stator frame to the TVA Central Lab for analytical analysis of the material/composition characteristics as well as crack structure and size. The results of this analysis are to be used in the performance of a parametric fracture analysis based upon crack size and material properties testing. A finite element analysis may be performed if the results of the parametric fracture analysis are inconclusive.

#### Date on which Evaluation will be Completed

The evaluation is expected to be completed on or before May 31, 2012.