

October 17, 2006

Mr. Karl W. Singer  
Chief Nuclear Officer and  
Executive Vice President  
Tennessee Valley Authority  
6A Lookout Place  
1101 Market Street  
Chattanooga, TN 37402-2801

SUBJECT: BROWNS FERRY NUCLEAR PLANT, UNIT 1 — REVIEW OF PROPOSED  
AMENDMENT FOR FIVE PERCENT INCREASE IN THERMAL POWER  
(TAC NO. MD3048) (TS-431)

Dear Mr. Singer:

The purpose of this letter is to inform you of the U.S. Nuclear Regulatory Commission (NRC) staff's review methodology for your September 22, 2006, license amendment request. This methodology was discussed with your staff on October 10, 2006. On September 22, 2006, the Tennessee Valley Authority (the licensee) submitted a request to supplement the Browns Ferry Nuclear Plant (BFN) Unit 1 June 28, 2004, request. The June 28, 2004, amendment request involves a change in licensed thermal power from 3293 megawatt thermal (MWt) to 3952 MWt, an approximate 20 percent increase in thermal power (commonly referred to as an extended power uprate (EPU)). The September 22, 2006, supplement requested approval of an increase in licensed thermal power from 3293 MWt to 3458 MWt with an attendant 30-pounds per square inch increase in reactor pressure. This represents an approximate 5-percent increase above the original licensed thermal power (OLTP) of 3293 MWt, and is commonly referred to as a stretch power uprate. The NRC staff has reviewed the information provided and determined that sufficient information has been provided to begin the technical review of your application.

In the submittal, TVA states that the analyses and evaluations previously performed for EPU operation at 120 percent OLTP in the PUSAR (Power Uprate Safety Analysis Report) support and/or bound operation at lesser power levels, subject to the operating restrictions and limitations that would be applicable. In other cases, the staff requested and you have agreed to provide cycle-specific analyses (105% power level) e.g, safety limit minimum critical power ratio. In its review of your stretch power uprate request, the NRC staff will use the information supplied in support of your EPU application to determine if there is reasonable assurance that operation at the stretch power uprate conditions is consistent with the Commission's regulations. The results of this review will be documented in a safety evaluation. This safety evaluation will not contain any conclusions regarding the acceptability of your analysis in support of operation at EPU conditions.

The NRC staff will subsequently review the information supplied in support of your EPU application in its entirety to determine if there is reasonable assurance that operation at EPU conditions is consistent with the Commission's regulations. This review will be documented in a separate, stand-alone safety evaluation that will specifically address each topic delineated in

K. Singer

- 2 -

the template safety evaluation provided in the Review Standard. The amendment package, including the safety evaluation, will be reviewed in accordance with standard practice, which includes review by the Advisory Committee for Reactor Safeguards.

If you have any questions, please contact the BFN Unit 1 Project Manager, Ms. Margaret Chernoff, at (301) 415-4041.

Sincerely,

*/RA/*

L. Raghavan, Chief  
Project Directorate II-2  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-259

cc: See next page

K. Singer

- 2 -

the template safety evaluation provided in the Review Standard. The amendment package, including the safety evaluation, will be reviewed in accordance with standard practice, which includes review by the Advisory Committee for Reactor Safeguards.

If you have any questions, please contact the BFN Unit 1 Project Manager, Ms. Margaret Chernoff, at (301) 415-4041.

Sincerely,

*/RA/*

L. Raghavan, Chief  
Project Directorate II-2  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-259

cc: See next page

Distribution:

PUBLIC  
LPL2-2 R/F  
RidsNrrDorl  
RidsNrrDorlLpl2-2  
RidsNrrPMMChernoff  
RidsNrrPMEBrown  
RidsNrrLABClayton  
RidsOgcRp  
RidsAcrsAcnwMailCenter  
RidsNrrDorlDpr  
RidsRgn2MailCenter (MWidmann)  
R. Caruso, ACRS  
M. Zabler, OGC

ADAMS Accession No.: ML062900057

NRR-106

OFFICE	LPL2-2/PM	LPL2-2/PM	LPL2-2/LA	LPL2-2/BC
NAME	EBrown	MChernoff	BClayton	LRaghavan
DATE	10/17/06	10/17/06	10/17/06	10/17/06

**OFFICIAL RECORD COPY**

## **BROWNS FERRY NUCLEAR PLANT**

Mr. Karl W. Singer  
Tennessee Valley Authority  
cc:

Mr. Ashok S. Bhatnagar, Senior Vice President  
Nuclear Operations  
Tennessee Valley Authority  
6A Lookout Place  
1101 Market Street  
Chattanooga, TN 37402-2801

Mr. Larry S. Bryant, Vice President  
Nuclear Engineering & Technical Services  
Tennessee Valley Authority  
6A Lookout Place  
1101 Market Street  
Chattanooga, TN 37402-2801

Brian O'Grady, Site Vice President  
Browns Ferry Nuclear Plant  
Tennessee Valley Authority  
P.O. Box 2000  
Decatur, AL 35609

Mr. Robert J. Beecken, Vice President  
Nuclear Support  
Tennessee Valley Authority  
6A Lookout Place  
1101 Market Street  
Chattanooga, TN 37402-2801

General Counsel  
Tennessee Valley Authority  
ET 11A  
400 West Summit Hill Drive  
Knoxville, TN 37902

Mr. John C. Fornicola, Manager  
Nuclear Assurance and Licensing  
Tennessee Valley Authority  
6A Lookout Place  
1101 Market Street  
Chattanooga, TN 37402-2801

Mr. Bruce Aukland, Plant Manager  
Browns Ferry Nuclear Plant  
Tennessee Valley Authority  
P.O. Box 2000  
Decatur, AL 35609

Mr. Masoud Bajestani, Vice President  
Browns Ferry Unit 1 Restart  
Browns Ferry Nuclear Plant  
Tennessee Valley Authority  
P.O. Box 2000  
Decatur, AL 35609

Mr. Robert G. Jones, General Manager  
Browns Ferry Site Operations  
Browns Ferry Nuclear Plant  
Tennessee Valley Authority  
P.O. Box 2000  
Decatur, AL 35609

Mr. Larry S. Mellen  
Browns Ferry Unit 1 Project Engineer  
Division of Reactor Projects, Branch 6  
U.S. Nuclear Regulatory Commission  
61 Forsyth Street, SW.  
Suite 23T85  
Atlanta, GA 30303-8931

Mr. Russell R. Thompson, Acting Manager  
Corporate Nuclear Licensing  
and Industry Affairs  
Tennessee Valley Authority  
4X Blue Ridge  
1101 Market Street  
Chattanooga, TN 37402-2801

Mr. William D. Crouch, Manager  
Licensing and Industry Affairs  
Browns Ferry Nuclear Plant  
Tennessee Valley Authority  
P.O. Box 2000  
Decatur, AL 35609

Senior Resident Inspector  
U.S. Nuclear Regulatory Commission  
Browns Ferry Nuclear Plant  
10833 Shaw Road  
Athens, AL 35611-6970

State Health Officer  
Alabama Dept. of Public Health  
RSA Tower - Administration  
Suite 1552  
P.O. Box 303017  
Montgomery, AL 36130-3017

Chairman  
Limestone County Commission  
310 West Washington Street  
Athens, AL 35611