



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

December 14, 2006

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 - CORE OPERATING
LIMITS REPORT (COLR) FOR CYCLE 7 OPERATION**

In accordance with the requirements of Technical Specification 5.6.5.d, enclosed is the initial issue of the Unit 1 Cycle 7 COLR. The Unit 1 Cycle 7 COLR was issued, to include Shutdown Margin criteria, in support of fuel loading as the unit proceeds toward restart.

There are no new commitments contained in this letter. If you have any questions, please contact me at (256) 729-2636.

Sincerely,

William D. Crouch
Manager of Licensing
and Industry Affairs

Enclosure
cc: See page 2

D030

U.S. Nuclear Regulatory Commission
Page 2
December 14, 2006

Enclosure

cc (Enclosure):

Mr. Malcolm T. Widmann, Branch Chief
U.S. Nuclear Regulatory Commission
Region II
Sam Nunn Atlanta Federal Center
61 Forsyth Street, S.W., Suite 23T85
Atlanta, Georgia 30303-8931

NRC Resident Inspector
Browns Ferry Nuclear Plant
10833 Shaw Road
Athens, Alabama 35611-6970

Ms. Eva A. Brown, Project Manager
U.S. Nuclear Regulatory Commission
One White Flint, North
(MS 08G9)
11555 Rockville Pike
Rockville, Maryland 20852-2739

Ms. Margaret Chernoff, Project Manager
U.S. Nuclear Regulatory Commission
One White Flint, North
(MS 08G9)
11555 Rockville Pike
Rockville, Maryland 20852-2739

U.S. Nuclear Regulatory Commission
Page 3
December 14, 2006

DTL:JWD:BAB

Enclosure

cc (w/o Enclosure):

B. M. Aukland, POB 2C-BFN
M. Bajestani, NAB, 1A-BFN
A. S. Bhatnagar, LP 6A-C
R. H. Bryan, BR 4X-C
R. G. Jones, NAB 1A-BFN
G. V. Little, NAB 1D-BFN
R. A. DeLong, SAB-1A-BFN
B. J. O'Grady, PAB 1E-BFN
K. W. Singer, LP 6A-C
P. D. Swafford, LP 6A-C
E. J. Vigluicci, ET 11A-K
NSRB Support, LP 5M-C
EDMS WT CA-K (with Enclosure)

S:\licensing\lic\submit\subs\COLR U1C7R0.doc

ENCLOSURE

TENNESSEE VALLEY AUTHORITY
BROWNS FERRY NUCLEAR PLANT (BFN)
UNIT 1

CORE OPERATING LIMITS REPORT (COLR), REVISION 0,
FOR CYCLE 7 OPERATION

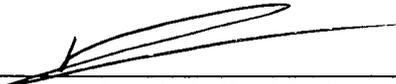
(SEE ATTACHED)

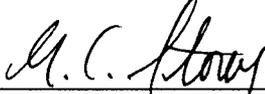
Browns Ferry Nuclear Plant
Unit 1 Cycle 7

**CORE OPERATING LIMITS REPORT
(COLR)**

TENNESSEE VALLEY AUTHORITY
Nuclear Fuel Design
BWR Fuel Engineering Department

Prepared By:  Date: 11-17-06
Earl E. Riley, Sr. Engineering Specialist
BWR Fuel Engineering

Verified By:  Date: 11-17-06
Brye C. Mitchell, Nuclear Engineer
BWR Fuel Engineering

Approved By:  Date: 11-17-06
Gregory C. Storey, Manager
BWR Fuel Engineering

Reviewed By:  Date: 11/20/06
J. M. Keck, Supervisor
Browns Ferry Reactor Engineering

Approved By:  Date: 11/20/06
PORC Chairman

Revision Log

<u>Revision</u>	<u>Date</u>	<u>Description</u>	<u>Affected Pages</u>
0	11/20/2006	Initial Release of Interim COLR (to support Fuel Loading Only)	All

1. INTRODUCTION

This Core Operating Limits Report (COLR) for Browns Ferry Nuclear Plant Unit 1 Cycle 7 is prepared in accordance with the requirements of Browns Ferry Technical Specification 5.6.5. This is an interim COLR issued to support fuel loading for the upcoming cycle. This COLR revision addresses only the following Technical Specification limit:

Shutdown Margin (SDM) Limit (Technical Specification 3.1.1)

The following core operating and Technical Specification limits are only required for operation and are not included in this interim COLR:

- a. Average Planar Linear Heat Generation Rate (APLHGR) Limit
(Technical Specifications 3.2.1 and 3.7.5)
- b. Linear Heat Generation Rate (LHGR) Limit
(Technical Specification 3.2.3)
- c. Minimum Critical Power Ratio Operating Limit (OLMCPR)
(Technical Specifications 3.2.2, 3.3.4.1, and 3.7.5)
- d. Average Power Range Monitor (APRM) Flow Biased Rod Block Trip Setting
(Technical Requirements Manual Section 5.3.1 and Table 3.3.4-1)
- e. Rod Block Monitor (RBM) Trip Setpoints and Operability
(Technical Specification Table 3.3.2.1-1)

2. APLHGR LIMIT (TECHNICAL SPECIFICATIONS 3.2.1 AND 3.7.5)

The APLHGR limit will be supplied in a later COLR revision prior to Unit 1 Cycle 7 operation.

3. LHGR LIMIT (TECHNICAL SPECIFICATION 3.2.3)

The LHGR limit will be supplied in a later COLR revision prior to Unit 1 Cycle 7 operation.

4. OLMCPR (TECHNICAL SPECIFICATIONS 3.2.2, 3.3.4.1, AND 3.7.5)

The MCPR Operating Limit (OLMCPR) will be supplied in a later COLR revision prior to Unit 1 Cycle 7 operation.

5. APRM FLOW BIASED ROD BLOCK TRIP SETTING (TECHNICAL REQUIREMENTS MANUAL SECTION 5.3.1 AND TABLE 3.3.4-1)

The APRM Rod Block trip setting will be supplied in a later COLR revision prior to Unit 1 Cycle 7 operation.

6. ROD BLOCK MONITOR (RBM) TRIP SETPOINTS AND OPERABILITY (TECHNICAL SPECIFICATION TABLE 3.3.2.1-1)

The RBM trip setpoints and applicable power ranges will be supplied in a later COLR revision prior to Unit 1 Cycle 7 operation.

7. SHUTDOWN MARGIN (SDM) LIMIT (TECHNICAL SPECIFICATION 3.1.1)

The core shall be subcritical with the following margin with the strongest OPERABLE control rod fully withdrawn and all other OPERABLE control rods fully inserted (Ref. 2).

$$\text{SDM} \geq 0.38\% \text{ dk/k}$$

8. REFERENCES

1. Global Nuclear Fuel Analytical Methodology References:
 - a) NEDE-24011-P-A-15, "General Electric Standard Application for Reactor Fuel", September 2005.
 - b) NEDE-24011-P-A-15-US, "General Electric Standard Application for Reactor Fuel (Supplement for United States)", September 2005.
2. Browns Ferry Unit 1 Custom (pre-ITS) Technical Specification Section 4.3.A.1, "Reactivity margin core loading".