

September 7, 2006

TVA-BFN-TS-432

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 - RESPONSE TO
NRC LETTER, DATED JULY 7, 2006 - REVIEW OF PENDING
LICENSE AMENDMENT REQUEST (TAC NO. MC4797) (TS-432)**

This letter provides the additional information requested by NRC in the letter dated July 7, 2006, (Reference 1) and augments the TVA letter dated October 12, 2004 (Reference 2) pertaining to License Condition (LC) 2.C(4). Specifically, TVA proposed a license amendment to BFN DPR-33 in the October 12, 2004 letter, that described completion of LC 2.C(4) and requested its removal from the BFN Unit 1 license.

The origin of LC 2.C(4) began on September 6, 1996 (Reference 3), when TVA submitted Units 1, 2, and 3 Technical Specifications (TS) Change 362 - Improved Technical Specifications (ITS). This change was TVA's proposed conversion package from custom TS to ITS. At the time, Units 2 and 3 were operating and Unit 1 was in long-term lay-up with no specific plans for return to service.

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Since TVA was adopting a relatively few Unit 1 TS values that were not supported by design basis documentation at that time, TVA proposed utilizing a LC to ensure, in part, that the Unit 1 TS would be supported and reflected by the plant's design basis prior to returning the associated equipment to service. As part of NRC's approval of the ITS for BFN Units 1, 2 and 3 (Amendment 234 - Reference 4), NRC imposed LC 2.C(4), which states:

"The licensee shall review the Technical Specification (TS) changes made by License Amendment No. 234 and any subsequent TS changes, verify that the required analyses and modifications needed to support the changes are complete, and submit them for NRC review and approval prior to entering the mode for which the TS applies. This amendment is effective immediately and shall be implemented prior to entering the mode for which the TS applies."

The open items identified for Unit 1 Restart during the conversion from custom to ITS were listed on Page 12 of the accompanying Safety Evaluation. These items were associated with the confirmation of certain calibration frequencies, instrument check frequencies, system configurations, or setpoints.

TVA's plan for satisfying this License Condition was submitted in Reference 5. TVA's October 12, 2004 amendment request reflected the implementation of that plan. As detailed in Enclosure 1 of that letter, confirmation of the calibration frequencies, instrument check frequencies, system configurations, and setpoints identified by TVA in TS-362 and reflected in the NRC's Safety Evaluation have been provided as part of separate Unit 1 proposed TS amendment requests.

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In addition, as stated in reference 1, since the approval of the conversion to ITS, several Unit 1 TS changes have been approved or are currently under NRC review. TVA has reviewed the TS changes made since the conversion to ITS and the analyses needed to support the Unit 1 TS have been completed except for the seismic analysis associated with LC 2.C(15). Also, since Unit 1 is no longer in a long-term lay-up condition, there is no need for continuation of LC 2.C(4) since the Unit 1 supporting analyses will be completed for each proposed TS change. In summary, this is the basis for TVA concluding that LC 2.C(4) is complete and we therefore request its removal from the license.

NRC concludes in their July 7, 2006 letter, that after reviewing TVA's proposed amendment, additional data is needed to approve removal of the license condition. The enclosure to this letter provides the information requested by NRC.

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

I declare under penalty of perjury that the foregoing is true and correct. Executed on this 7th day of September, 2006.

Sincerely,

Original signed by:

William D. Crouch
Manger Of Licensing
and Industry Affairs

References:

1. NRC letter to TVA, dated July 7, 2006, "Review of Pending License Amendment Request (TAC No. MC4797) (TS-432)"
2. TVA letter dated October 12, 2004, "Completion of License Condition (LC) 2.C(4)."
3. TVA letter, T.E. Abney to NRC, dated September 6, 1996, "Browns Ferry Nuclear Plant (BFN) - Units 1, 2 and 3 - Technical Specification (TS) Change TS-362 - Request to Convert Current TSs to Improved Standard TS (ISTS) Consistent with NUREG-1433, Revision 1."

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References (Cont'd):

4. NRC letter, L. Raghavan to J.A. Scalice, dated July 14, 1998, "Amendment Nos. 234, 253 and 212 to Facility Operating License Nos. DPR-33, DPR-52 and DPR-68: Regarding Conversion to Improved Standard Technical Specifications for the Browns Ferry Nuclear Plant, Units 1, 2 and 3 (TAC Nos. M96431, M96432 and M96433)."

5. TVA letter, T.E. Abney to NRC, dated June 16, 2004, "Browns Ferry Nuclear Plant (BFN) - Unit 1 - Plan For Satisfying License Condition 2.C(4)."

Enclosure

cc Enclosure):

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On October 12, 2004, TVA submitted a proposed amendment¹ describing the completion of License Condition (LC) 2.C(4) and requested its removal from the license DPR-33. On July 7, 2006, NRC requested² additional information to support their review of TVA's proposed amendment to remove LC 2.C(4) from the subject license. Each specific NRC request and the TVA response are provided below.

NRC Request 1.0:

List and discuss the justifications for all changes to the TS made by License Amendment 234 and subsequent license amendments. The discussion should include whether new analyses and/or modifications were required and whether the analyses were provided to the NRC staff for review and approval. The discussion should also include the confirmation that the analyses were approved by the NRC staff at the time the applicable amendment was issued and the modifications were completed, if required.

TVA Response to NRC Request 1.0

TVA has performed a review of the TS change requests that were submitted from the timeframe of the request to convert to ITS until the date of this letter to identify any differences between Unit 1 and the two operating units. Attachment 1 summarizes the review and provides a disposition for differences that were identified by that review. Attachment 2 provides a discussion of the other changes that were reviewed and approved as part of the ITS conversion but were identified as being beyond the scope of the conversion. No other changes for 3 unit operation at EPU are required.

With respect to the analyses that were required to be performed as a result of License Amendment 234 and subsequent license amendments,

¹ TVA letter to NRC, dated October 12, 2004, "Browns Ferry Nuclear Plant (BFN) Unit 1 - Completion of License Condition 2.C(4)"

² NRC letter to TVA, dated July 7, 2006, "Browns Ferry, Unit 1 - Review of Pending License Amendment Request (TAC NO. MC4797)(TS-432)"

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these amendments and proposed Technical Specifications have been reviewed to identify any outstanding Unit 1 supporting analyses which would have to be submitted to NRC. For TS 405 Alternative Source Term, TVA committed to submit the Unit 1 analyses for Loss of Coolant, Control Rod Drop and Main Steam Line Break accidents. These analyses were provided to NRC as part of a separate submittal³.

As part of the issuance of the Alternative Source Term license amendment, NRC established a license condition for Unit 1 only. LC 2.C(15) requires TVA to confirm that the conclusions made in TVA's letter dated September 17, 2004, for the turbine building remain acceptable using seismic demand accelerations based on dynamic seismic analysis prior to the restart of Unit 1. No other Unit 1 supporting analyses need to be submitted to NRC.

NRC Request 2.0:

Based on discussions with TVA and the Unit 1 status update dated February 21, 2006 [ADAMS Accession No. ML060520652], the NRC staff understands that TVA is updating the Unit 1 design basis analyses and calculations to support the requested extended power uprate, in lieu of updating the analyses and calculations to support operation at the current licensed thermal power limit. TVA should address how the analyses and calculations to support the uprated condition satisfy the requirements of the license conditions, when it is applicable.

TVA Response to NRC Request 2.0:

Implementation of the Design Baseline Verification Program (DBVP) validated the key plant specific values and setpoints that are reflected in the Technical Specifications (TS). Unit 1 mechanical/nuclear, electrical and civil calculations and analyses were revised, considering EPU conditions and parameters.

³ TVA letter, T. E. Abney to NRC, "Browns Ferry Nuclear Plant (BFN) – Units 1, 2, and 3 – Response to Request for Additional Information (RAI) and Unit 1 Analysis Results Related to Technical Specifications (TS) Change No. TS-405 – Alternative Source Term (AST) (TAC Nos. MB5733, MB5734, MB5735), dated May 17, 2004.

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The purpose and scope of the DBVP that was performed on BFN Unit 1 was to validate key plant specific values and setpoints in the Unit 1 Technical Specifications. The DBVP confirmed the design bases and evaluated plant configurations to ensure:

- Plant configuration satisfied the design bases,
- Configuration of the systems and components within the scope of the DBVP was supported by engineering analysis and documentation, and
- Plant configuration was in conformance with NRC regulations and TVA licensing commitments.

The DBVP addressed systems, or portions thereof, that perform safety-related functions, including the safety functions necessary to mitigate postulated design basis accidents which are discussed in the Updated Final Safety Analysis (UFSAR). The following is a list of the essential elements of the overall DBVP program:

- Research and develop design basis documentation,
- Verify the plant configuration,
- Reconcile the plant configuration with engineering design documents, including essential calculations and design criteria,
- Reconcile the plant configuration with the Browns Ferry UFSAR and licensing commitments,
- Perform system evaluations of the verified plant configuration to identify design discrepancies,
- Issue configuration control drawings consistent with the plant configuration for systems within the scope of the DBVP, and

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- Implement an improved change control process to ensure the accuracy and completeness of design basis documents (i.e., design criteria, calculations, drawings, and the safe shutdown analysis). These documents are reviewed when design changes are made and are updated accordingly.

Design basis documents verified or developed during the DBVP included the Safe Shutdown Analysis, system design criteria, essential calculations, and drawings.

The essential calculations portion of the DBVP included plant systems or features (or portions thereof) whose failure could:

- (1) Result in a loss of Reactor Coolant System integrity;
- (2) Result in loss of ability to achieve safe shutdown; or
- (3) Result in a release of radioactivity offsite in excess of the 10 CFR 100 guidelines.

The essential calculations program:

- (1) Identifies calculations considered to be essential;
- (2) Ensures that essential calculations support the plant licensing commitments and design basis requirements;
- (3) Ensures that essential calculations are technically adequate and consistent with the plant configuration;
- (4) Ensures that essential calculations supporting the DBVP are consistent with the plant functional configuration;
- (5) Implements a process to maintain the technical adequacy and retrievability of essential calculations;
- (6) Implements a process that identifies and tracks calculations supporting engineering changes, identifies interactions between calculations and plant modifications and correlates the calculations with design documents.

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The Browns Ferry Nuclear Plant is a three-unit plant. Therefore, the design was evaluated with respect to possible influence of one unit on the others through the various coupling mechanisms which exist in the design. The subject of unit sharing and interactions was reviewed at the time of the original licensing of BFN. Multi-unit sharing and interactions are extensively discussed in UFSAR, Appendix F - Unit Sharing and Interactions. One of the explicit objectives of this appendix is to provide additional information to support the TS and the associated operating and emergency procedures in respect to shared systems. The Unit 1 DBVP ensures design requirements reflect the demands of three-unit operation.

The adequacy of the DBVP and its implementation on Unit 2 were extensively reviewed by NRC ^(4,5,6,7,8,9,10). NRC's review of the Unit 3 DBVP program confirmed it was more comprehensive than the

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- ⁴ NRC letter to TVA, dated December 8, 1988, Volume 3, Section III.2.0 (Configuration Management Program - Design Baseline and Verification Program) of the Nuclear Performance Plan - Browns Ferry Nuclear Plant
- ⁵ NRC letter to TVA, dated April 14, 1989, Safety Evaluation Report on the Browns Ferry Nuclear Performance Plan - NUREG-1232, Volume 3
- ⁶ NRC letter to TVA, dated October 24, 1989, Supplement 1 to the Safety Evaluation Report on the Browns Ferry Nuclear Performance Plan - NUREG-1232, Volume 3
- ⁷ NRC letter to TVA, dated September 8, 1988, Inspection Report Nos. 50-259/88-07, 50-260/88-07 and 50-296/88-07
- ⁸ NRC letter to TVA, dated June 30, 1989, Inspection Report Nos. 50-259/89-07, 50-260/89-07 and 50-296/89-07
- ⁹ NRC letter to TVA, dated February 26, 1990, NRC Inspection Report No. 50-260/89-42
- ¹⁰ NRC letter to TVA, dated January 23, 1991, NUREG-1232, Volume 3, Supplement 2 - Browns Ferry Unit 2 [Section 2.1, Page 2-1]

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Unit 2 effort, and was therefore acceptable ⁽¹¹⁾. A special NRC DBVP inspection was conducted in December, 1994 ⁽¹²⁾.

TVA's commitments ^(13,14) to complete the DBVP on Unit 1 prior to return to service have been completed. All essential calculations and Baseline Test Requirement Documents are issued. TVA has notified the NRC that the DBVP was complete for Unit 1 ¹⁵.

As part of the closure of License Condition 2.C.4, a review was conducted to ensure that each Technical Specification instrument value has an issued Unit 1 Nuclear Engineering Setpoint and Scaling Document (NESSD) and an associated calculation. Other parameters not related to instruments (e.g. Pressure-Temperature Curves) were also verified to have Unit 1 applicable supporting documents.

¹¹ NRC letter to TVA, dated November 21, 1991, Assessment of Browns Ferry Nuclear Plant, Units 1 and 3 Design Baseline Verification Program

¹² NRC letter to TVA, dated January 17, 1995, NRC Inspection Report Nos. 50-259/94-31, 50-260/94-31, and 50-296/94-31

¹³ TVA letter to NRC, dated July 10, 1991, Regulatory Framework for the Restart of Units 1 and 3

¹⁴ TVA letter to NRC, dated December 13, 2002, Regulatory Framework for the Restart of Unit 1

¹⁵ TVA letter to NRC, dated May 22, 2006, Status of Unit 1 Restart Issues, Revision 6

ATTACHMENT 1

Comparison of TS Amendments Requests

	TS No [Internal Tracking No]	Submittal Date(s)	Title/Description	Delta Created Between U1 & U2/U3		Unit	Comments/Disposition
				Yes	No		
1.	351.	10/7/94 6/4/97	Revision to Surveillance Requirements for Plant Operation with Inoperable Diesel Generators, "Diesel Generator Surveillance Requirements" Admin Changes		X	1, 2 & 3	TVA's 6/4/97 letter withdrew this TS [Redundant to TS-362 {9/6/96}]
2.	352.	5/3/96			X	1, 2 & 3	Withdraws TS-343T & TS-347T
3.	353.	6/2/95 3/6/97R1 4/11/97SI 5/13/97	Power Range Neutron Range Monitor Upgrade with Implementation. of Avg. APRM & RBM		X	1, 2 & 3	Withdrawn 10/5/98
4.	354.	9/8/98 12/15/98 2/22/99	Oscillation Power Range Monitor (OPRM)	X*		2	SER – 3/5/99 [Amdmt: 258] * U1 – TS-443 submitted 1/6/06
5.	355.	1/4/95	Reactor Protection Sys TS Reqmts for Intermediate Range Monitors & Avg. Power Range Monitor Trip Function		X	1, 2 & 3	SER – 11/2/95 [Amdmts: 227, 242, 201]
6.	356.	10/18/96 10/1/98	Withdraw of TS-356 – Increase in allowable Main Steam Isolation Valve Leakage Rate		X	1, 2 & 3	Withdrawn 10/1/98
7.	357.	5/18/95	Revision to TS Bases TS-357 – Clarify Design Function of Avg Pwr range Monitor Rod Block Sys		X	1, 2 & 3	
8.	358.	Not Submitted	Deleted				Deleted
9.	359.	5/11/95 6/30/95 RAI	Scram Pilot Air Header Low Pressure Trip	X**		2&3	SER – 8/29/95 [Amdmts: 223, 238 & 197] **Unit 1 TS 437 submitted November 3, 2003. This amendment changes the allowable value for the Scram Discharge Volume Water Level High Float Switches and removes the Low Scram Pilot Air Header Pressure Switches from service
10.	360.	9/18/98	Withdraw of TS-360 [TIP] & TS-395 [RHRSW Pumps Required for Multi-Unit Operation]		X	1, 2 & 3	Based on NRC approval of TS-362 [TTS], TVA no longer needed NRC's approval of TS-360 or TS-395
11.	361.	6/2/95	RHRSW TS Reqmt for Standby Coolant Supply & TS 3/4.2.F Instrument No. Chg.		X	1, 2 & 3	SER – 11/2/95 [Amdmts: 225, 240 & 199]

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	TS No [Internal Tracking No]	Submittal Date(s)	Title/Description	Delta Created Between U1 & U2/U3		Unit	Comments/Disposition
				Yes	No		
12.	362.	9/6/96 5/1/97 S1	Improved Standard Technical Specs.		X	1, 2 & 3	SER – 7/14/98 [Amdmts: 234, 253, & 212]
13.	363.	Not Submitted	SAFER/GESTR				Deleted
14.	364.	12/8/95 1/10/96 S	Option B to 10CFR 50, App. J		X	1, 2 & 3	SER 2/22/96 [Amdmts: 228, 242, & 203]
15.	365.	7/10/95	Bases Change – Vacuum Breakers – 3.7/4.7 [To be consistent with ISTS]		X	1, 2 & 3	
16.	366.	8/17/01	Removal of Scram Pilot Air Header Pressure Switches	X*		2&3	SER – 4/8/02 [Amdmts: 276 & 235] *Unit 1 TS 437 submitted November 3, 2003. This amendment changes the allowable value for the Scram Discharge Volume Water Level High Float Switches and removes the Low Scram Pilot Air Header Pressure Switch from service
17.	367.	Not Submitted	Removal of TS Requirements for Charcoal Filters from Standby Gas Treatment and Control Room Emergency Ventilation Sys (Application of NUREG- 1465 Source Term)				Deleted
18.	368.	9/13/95	Administrative Changes to TS Tables 4.2.B & 4.2.C –	X**		3	SER – 11/13/95 [Amdmt: 202] Deletes HPCI/RCIC Instrument Checks that are not Required [U2 was previously approved TS-263 - SER -11/13/95/Amdmt 167] **In Table 4.2.B the requirement to perform daily instrument checks for the Steam Supply Low Pressure and Turbine Exhaust Diaphragm High Pressure Coolant Injection systems is deleted for all 3 units; however Unit 1 had no basis at that time. The pressure switches that perform these functions do not have indications; therefore, instrument checks are not appropriate. Table 4.2.C had a typo which was fixed for all 3 units. ISTS conversion corrected inconsistencies between U1 and U2/3. BFN has verified that the U1 Pressure Switches also do not have

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	TS No [Internal Tracking No]	Submittal Date(s)	Title/Description	Delta Created Between U1 & U2/U3		Unit	Comments/Disposition
				Yes	No		
19.	369.	Not Submitted	Revision of Units 1, 2, and 3 TS for Consistency				indication and therefore the instrument checks are not appropriate.
20.	370.	11/17/95	Revision of Bases for Consistency	X		1, 2 & 3	Deleted SER – 2/7/96 [Amdmt.: 194,181 & 190] This revision to BFN U1, U2 and U3 Bases was done to reflect the lighter weight of the GE 11 fuel design. Conversion to ITS deleted the weights of the fuel assemblies.
21.	371.	10/2/95	Bases only Change for TS 361	X		1, 2 & 3	NRC SER 11/2/95 [Amdmt: 225, 240, & 199] [SER issued for TS-371 & TS-361]
22.	372.	9/26/97 5/19/98	Section 6 – Administrative Controls Deletion	X		1, 2 & 3	SER – 7/9/98 [Amdmts: 233, 252, 211] NQAP – Reqmts moved for BFN & SQN
23.	373.	5/20/96	Missed Surveillances – GL 87-09	X		1, 2 & 3	SER – 8/5/96 [Amdmt.: 230, 245; & 205]
24.	374.		Change in Operability Requirements for the 1 Rod Withdrawn Interlock	X		1, 2 & 3	
25.	375.	4/14/96	ECCS Clarifications	X		1, 2 & 3	NRC SER – 4/16/96 [Amdmts.: 229, 244, & 204]
26.	376.	3/12/97	Increase in AOT for Diesel Generators	X*		2&3	NRC SERs 8/2/99 & 9/23/99 [Amdmts. 259 & 218] *Refer to TS-426
27.	377.	6/21/96 2/7/97	Change in Safety Limit Minimum Critical Power Ratio (SLMCP) and Revision to Bases Description of Residual Heat Removal Supplemental Fuel Pool Cooling Mode	X**		1, 2 & 3	SER - 5/7/97 [Amdmts: 247 & 207] U1 SLMCPR withdrawn only because of ITS – 10/13/98 – TVA states in this letter that since NRC approved TVA’s conversion from CTS to ISTS [7/14/98] the custom TS are no longer in use and the U1 TS changes that were previously requested in custom format in TS-377 are no longer needed and are, hereby, requested to be withdrawn. The revision to the TS Bases Description of Residual Heat Removal supplemental Fuel Pool Cooling Mode was approved for all three units. **U1 TS-455, “Safety Limit Minimum Critical Power Ratio, (SLMCP),” submitted 5/1/06, addresses this TS change.

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				Yes	No		
28.	378.	Not Submitted	ECCS Suction Strainer & Suppression Pool				Deleted
29.	379.	Not Submitted	Fuel Loading with CRD's Withdrawn				Deleted
30.	380.	8/30/96	Deletion of Water Quality License Condition		X	1, 2 & 3	SER – 7/8/97 [Amdmt.: 229; 207, & 204]
31.	381.	9/30/99	License Condition Update		X	1, 2 & 3	SER – 12/16/99 [Amdmts 237, 262, & 222]
32.	382.	Not Submitted	Temporary Change to the Requirements of TS Limiting Condition for Operation 3.6.F.1				Deleted
33.	383.	Not Submitted	LPCI MG Set Elimination			3	Deleted
34.	384.	10/1/97 10/14/97 3/16/98 3/20/98 4/1/98 4/28/98 5/1/98	Power Update	X*		2&3	SER - 9/8/98 [Amdmts: 254 & 214] Other Supplements: 5/4/98;5/20/98; 5/22/98; 6/12/98; 6/17/98; 6/26/98; 7/17/98; 7/24/98; & 7/24/98. * U1 EPU TS-431 submitted: 6/28/04 & TS-431 Supplement 1, "105% PU" to be submitted.
35.	385.	Not Submitted	Drywell By-Pass Leakage Test Interval Extension				Deleted
36.	386.	12/11/96 11/3/97	Safety Relief Valve Setpoint (SRV) Tolerance	X**		1, 2 & 3	SER – 5/18/98 [Amdmts: 251 & 210] TVA submitted this TS for BFN's 3 units. However, NRC rejected the U1 chg. **The U1 change is addressed in TVA's U1 EPU TS-431 chg requests and in Attachment 2 of this letter.
37.	387.	6/2/97 11/19/98 SI	Single Recirc. Loop Operation	X***		1, 2 & 3	SER – 12/23/98. [Amdmts: 236,256, & 216] *** This TS change revises App. A to allow continued operation with a single recirc. Loop in operation. NRC states in SER [pg. 2] Section 3.0 Evaluation: "... The licensee will perform a cycle specific analysis with SLO for Unit 1 prior to its restart. Based on industry experience, the NRC staff expects similar results for Unit 1 as

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				Yes	No		
38.	388.	2/5/97 4/24/97	TS Bases Change on Dry Well to Secondary Containment Leak Test				those for units 2 and 3. As documented in Global Nuclear Fuel Supplemental Reload Licensing Report for BFN 1, Reload 6, Cycle 7, [submitted: 5/1/06] this analysis has been completed for both TLO and SLO. This report concluded: “. . . . The Cycle 7 Option III evaluation provides adequate protection against violation of the Safety Limit MCPR for the two postulated reactor instability events as long as Table 15.1 is satisfied The OPRM setpoints for Two loop Operation (TLO) are conservative relative to Single Loop Operation (SLO) and are therefore bounding.” SER – 7/8/97 [Amdmts: 189, 204, 161]
39.	389.	4/24/97	TS Bases Change - 3.5.N Reference Update			1, 2 & 3	SER – 7/8/97 – [Amdmts: 240 & 199] The purpose of this administrative change is to reflect updated LOCA analyses for U2&U3. ISTS fixed it for Unit 1.
40.	390.	6/12/98 8/14/98S1	24-Month Fuel Cycle	X*		1, 2 & 3	SER – 11/30/98 [Amdmts: 235,255, & 215] TVA’s 6/12/98 letter states that the U1 TS changes are for U1 equipment that is required to support U2 & U3 Operation and maintain U1 in shutdown condition. *U1 TS-433, 24 Month Fuel Cycle was submitted: 8/16/04
41.	391.	6/19/97 8/15/97	Increase in EDG AOT for 12 Year PMT (Temporary Change)			2&3	SER 12/22/97 [Amdmts: 250 & 209] – This was a temporary one-time 14-day LCO for each EDG to accommodate pending vendor recommended maintenance activities.
42.	392.	9/4/98	License Amendment – Use of Containment Overpressure for ECCS Pump NPSH Analyses	X**		2&3	SER -9/3/99 [Amdmts: 261 & 220] TVA submitted this request to change U2 & U3 license basis to permit the use of available containment overpressure for ECCS pump NPSH. TVA states that this submittal is for U2 & U3 only since U1 is shutdown and in an extended outage.

ATTACHMENT 1

Comparison of TS Amendments Requests

	TS No [Internal Tracking No]	Submittal Date(s)	Title/Description	Delta Created Between U1 & U2/U3		Unit	Comments/Disposition
				Yes	No		
43.	393.	3/3/98 11/13/98 12/15/98	P-T Curves	X*		2&3	**Use of Containment Overpressure for U1 is addressed in TS-431 Extended Power Uprate and new TS-431 Supplement 1, "105% PU" SER - 1/15/99 [Amdmts 257 & 217] * U1 TS-428, Update of Pressure-Temperature (P-T) Curves, submitted 12/6/04 covers this TS Change SER issued: 7/26/06 Deleted
44.	394.	Not Submitted	Deleted				Deleted
45.	395.	2/30/97 9/18/98	Number of RHRSW Pumps Required for Multi-Unit Operation & Cold Shutdown		X	1, 2 & 3	Withdrawn based on NRC approval of TS-362 [ITS]. TVA no longer needed the NRC approval of TS-360 or TS-395 [CTS portion]
46.	396.	11/21/00	Safety Limit Minimum Critical Power Ratio, (SLM CPR) Margin Increase		X**	1, 2 & 3	**U1 TS-455, "Safety Limit Minimum Critical Power Ratio, (SLM CPR)," submitted 5/1/06 covers this TS Change
47.	397.	6/3/99 [99-54]	Lower the Allowable Value for Reactor Vessel Water Level -Low, Level 3	X***		2&3	SER - 8/16/99 [Amdmts: 260 & 219] ***U1 TS-434, "Lowering the Allowable Value for Reactor Vessel Water Level - Low Level 3" (supports EPU) submitted 3/9/04 addressed this change
48.	398.	7/28/99	Unit 3 OPRM	X****		3	SER - 9/27/99 [Amdmt 221] ****U1 TS-443, "OPRM" submitted 1/6/06 addressed this change
49.	399.	9/28/99	Increased MSIV Leakage Rate Limits and Exemption from 10CFR50, App J	X+		2&3	SER - 3/14/00 [Amdmts 263 & 223] +U1 TS-436, "MSIV Leakage Rate Limits and Exemption From 10CFR50, App. J," submitted 7/9/04 addressed this change
50.	400.	10/20/00	Relaxation of Excess Flow Check Valve (EFCV) Surveillance Testing Frequency	X++		2&3	SER - 1/29/01 [Amdmts 268 & 228] ++U1 TS-438, Revision to Excess Flow Check Valve (EFCV) Surveillance Testing Frequency, submitted 10/12/04 addressed this change
51.	401.	3/15/00	LCO Time for CAD Subsystem Inoperability	X+++		2&3	SER - 5/24/00 [Amdmts: 265 & 225] TVA states in Encl. 1 [pg E1-1] Section I. Description of the Proposed TS Change: "... A Change to

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Comparison of TS Amendments Requests

	TS No [Internal Tracking No]	Submittal Date(s)	Title/Description	Delta Created Between U1 & U2/U3		Unit	Comments/Disposition
				Yes	No		
52.	402.	3/29/00	TSTF-18 - Secondary Containment Access Doors	X		1, 2 & 3	Unit 1 TS is not being requested at this time since the CAD system connection to Unit 1 is capped off, and Unit 1 is defueled and in a extended outage.” +++Unit 1 TS-435, Limiting condition for Operation (LCO) Time for Containment Atmosphere Dilution (CAD) Subsystem Operability, submitted 8/2/04. NRC SER dated: 7/18/05. SER – 4/21/00 [Amdmts: 238, 264, & 224] This was an exigent amendment
53.	403.	8/28/00	Incorporation of Generic TS Changes – TS Sections 1.4, 3.0, 3.1.4 and 5.0 – Administrative TS Changes.	X		1, 2 & 3	SER – 11/21/00 [Amdmts: 239, 266 & 226]
54.	404.	11/6/02	RPV Integrated Surveillance Program	X*		2&3	SER – 1/28/03 [Amdmts: 279 & 238] *In the 11/6/02 letter, TVA requested a change to the BFN Units 2 and 3 RPV material surveillance program which incorporated the BWRVIP ISP into the BFN Units 2 & 3 licensing basis. BFN UFSAR, Amdmt 19, page 4.2-16 states in part: “. . . Unit 1 is currently not in the scope of the ISP, but will be evaluated for inclusion prior to unit restart. . . .” VIP change to incorporate BFN U1 data currently scheduled for 1 st Qrt of 2007 - U1 Project Plan is tracking this change. TS-439, “Request for Revision to the Reactor Pressure Vessel Material Surveillance Program”
55.	405.	7/31/02 12/9/02 2/12/03 3/26/03 7/11/03 7/17/03 5/17/04 7/2/04	Alternative Source Term	X**		1, 2 & 3	SERs: 9/27/04 & 11/8/04 [Amdmts: 251, 290 & 249] **In SER dated 9/27/04, NRC states: “. . . the following license condition will be added on Unit 1 only: ‘The licensee is required to confirm that the conclusions made in TVA’s letter dated 9/17/04, for the turbine building remain acceptable using seismic demand accelerations

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Comparison of TS Amendments Requests

	TS No [Internal Tracking No]	Submittal Date(s)	Title/Description	Delta Created Between U1 & U2/U3		Unit	Comments/Disposition
				Yes	No		
		8/24/04 9/17/04 9/24/04					based on dynamic seismic analysis prior the restart of Unit 1.’ The approval of Unit 1 of this amendment does not constitute a change in the licensing basis of the alternative drain path for Unit 1, it does represent the NRC staff’s acceptance of the alternative drain path methodology proposed for use to implement AST. As noted above, TVA must receive approval of the change in licensing and design bases, as well as complete actions necessary to establish a seismically-rugged MSIV leakage alternative drain path, for Unit 1 prior to restart before the BFN Unit 1 loss-of coolant accident analysis can become effective.” The Unit 1 Project Plan tracks this issue for restart under the title, “U1 AST Turbine Building Seismic Ruggedness Evaluation – License Condition from TS-405”
56.	406.	10/6/00	TSTF – One LPCI INOP in Both ECCS Loops		X	1, 2 & 3	SER – 3/12/01 [Amdmts: 240, 269, & 229]
57.	407.	10/30/00	Deletion of Maximum Flow Path –MSIV Leakage SR		X	2&3	SER – 1/24/01 [Amdmts: 267 & 227]
58.	408.	9/3/02	TSTF-358, R5 – Missed Surveillance Requirements		X	1, 2 & 3	In 10/30/00 letter, TVA states that Unit 1 TS are not affected by this TS Change. [This TS change removed a change that was made previously for U2 & 3 only.] SER – 12/23/02 [Amdmts: 243, 278,& 237]
59.	409.	4/15/03	Control Room Ventilation System - Allowed Outage Time – TSTF-287, Rev. 5		X	1, 2 & 3	SER – 8/29/03 [Amdmts: 246, 283, & 241]
60.	410.	8/7/03	LCO/SR 3.0.4 – Adoption of TSTF-359 Rev B – Increase Flexibility in Mode Restraints		X	1, 2 & 3	SER – 12/1/03 [Amdmts: 249, 286, & 244]
61.	411.	11/6/00	TSTF-230,R1 – RHR Suppression Pool Cooling		X	1, 2 & 3	SER – 6/8/01 [Amdmts: 241, 272, & 230]

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Comparison of TS Amendments Requests

	TS No [Internal Tracking No]	Submittal Date(s)	Title/Description	Delta Created Between U1 & U2/U3		Unit	Comments/Disposition
				Yes	No		
62.	412.	8/10/01 2/11/02	TSTF-225, R0 – Refueling Equipment Interlocks		X	1, 2 & 3	SER – 3/6/02 [Amdmts: 242, 274, & 232]
63.	413.	2/5/01	RPV Material Surveillance Program Change – Request for Exigent License Amdmt		X	2	SER – 4/2/01 [Amdmt: 271] – This Amdmt modified the time of withdrawal of the second surveillance capsule until 16 EFY of operation, corresponding with the BFN U2C12 refueling outage planned for March 2003 and does not affect U3 or U1.
64.	414.	8/17/01 12/14/01 [S1] 2/6/02S2	P-T Curves	X*		2&3	SER – 3/28/02 [Amdmts: 275 & 233] * U1 TS-428, submitted 12/6/04 covers this TS Change SER issued: 7/26/06
65.	415.	7/25/01	Deletion of 120-Day Required Action for Restoration of OPRM Function – Emergency TS Change Request for Unit 2	X**		2&3	SER – 7/26/01 – U2 - [Amdmt: 273] SER – 9/13/01 – U3 - [Amdmt: 231] **U1 TSs TS-430, “Power Range Neutron Monitor Upgrade & TS-443, “OPRM” together address this U2 & U3 TS change.
66.	416.	11/1/01 3/15/02 RAI Resp. [02-16	Revised Safety Limit Minimum Critical Power Ratio (SLMCPR)	X***		3	SER – 3/29/02 – U3 - [Amdmt: 234] SER – 3/13/01 – U2 *** U1 TS-455, “Safety Limit Minimum Critical Power Ratio, (SLMCPR)” submitted 5/1/06 covers this TS Change
67.	417.	8/20/02	Reactor Water Cleanup System – Main Steam Valve Vault (MSVV) Area Temperature - High - Extension of Channel Calibration Surveillance Requirement Frequency - Main Steam Tunnel High Temperature Switches	X****		2&3	SER – 11/26/02 - [Amdmts: 277 & 236] – These amendments revise TS Table 3.3.6.1.1, “Primary Containment Isolation Instrumentation, “ Functional Unit 5 a, Reactor Water Cleanup System Isolation, Main Steam Valve Vault Area Temperature – High, to extend the frequency of the channel calibration surveillance requirement from the current 122 days to 24 months, and revise applicable Bases. ***U1,2&3 TS-447, Extension of Channel Calibration Surveillance Requirement Performance Frequency and Allowable Value Revision submitted 8/16/04 covers this issue for Unit 1.

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Comparison of TS Amendments Requests

	TS No [Internal Tracking No]	Submittal Date(s)	Title/Description	Delta Created Between U1 & U2/U3		Unit	Comments/Disposition
				Yes	No		
68.	418.	6/25/04	Extended Power Uprate	X*		2&3	*U1 TS-431, "EPU Operation," submitted 6/28/04 covers a similar TS Change
69.	419.	8/1/02	License Amendment Elimination of Pressure Regulator Downscale Failure (PRDF) as an Abnormal Operational Transient (AOT)		X**	1, 2 & 3	SER – 4/4/03 [Amdmts: 244, 281, & 239] ** NRC states in their SER that “. . . The changes are also applicable to Unit 1, which is currently defueled, based on your commitment to upgrade the Unit 1 EHC system to a digital fault-tolerant design similar to that installed on Units 2 and 3 prior to returning Unit 1 to power operation.” NCO 020058001 Tracking this commitment- Sys 047 – SPOC 2
70.	420.	10/25/02 12/20/02 2/11/03 2/21/03	Safety Limit Minimum Critical Power Ratio (SLMCP R) – Cycle 13 Operation	X***		2	SER – 2/28/03 [Amdmt: 280] ***U1 TS-455, "Safety Limit Minimum Critical Power Ratio, (SLMCP R)," submitted 5/1/06 covers this TS Change.
71.	421.	2/13/03	Framatome Fuel Design and Storage		X	1, 2 & 3	SER – 9/5/03 [Amdmts: 247, 284, & 242] This change removed the vendor specific acceptance criteria from the TS for fuel storage.
72.	422.	7/8/04	Remove Hydrogen Monitors from TS		X****	1, 2 & 3	SER – 2/14/05 [Amdmts 253, 292, & 251] ****NRC states in Section 4.0, "Verification and Commitments" in part: “. . . [4.1] The licensee has verified that it has a hydrogen monitoring system capable of diagnosing beyond design-basis accidents for Units 2 and 3, and will install such a system on Unit 1 prior to restart. The licensee has committed to maintain the hydrogen monitors within its TRMs. The licensee will implement this commitment as part of the implementation of this amendment. . . [4.2] . . . The licensee has verified that it has an oxygen monitoring system capable of verifying the status of the inert constraint for Units 2 and 3 and will install such as system on Unit 1 prior to restart. The licensee has committed to maintain

ATTACHMENT 1

Comparison of TS Amendments Requests

	TS No [Internal Tracking No]	Submittal Date(s)	Title/Description	Delta Created Between U1 & U2/U3		Unit	Comments/Disposition
				Yes	No		
73.	423.	2/19/03	Remove Post Accident Sampling System (PASS) from TS		X*	1, 2 & 3	the oxygen monitors within its TRMs.” This scope of work for Unit 1 is being done under DCN 51369. The physical work under this DCN is scheduled to be complete: 9/15/06. SER – 5/9/03 [Amdmts 245, 282, & 240] *NRC states in Section 4.0, “Verification and Commitments” in part: “. . . [4.1] The licensee has made a regulatory commitment to develop contingency plans for obtaining and analyzing highly radioactive samples of reactor coolant, suppression pool, and containment atmosphere. The licensee has implemented this commitment for Units 2 and 3 and will implement it for Unit 1 prior to fuel loading [4.2] The licensee has made a regulatory commitment to establish the capability of classifying fuel damage events at the Alert level threshold of 300 uCi/ml dose equivalent iodine. The methodology will be described within applicable emergency plan implementing procedures. These items are tracked by NCO 030025001 and NCO 030025002.
74.	424.	4/11/03 2/20/04	ECCS Actuated in Response to Design Basis Loss of LOCA		X**	1, 2 & 3	SER – 4/1/04 [Amdmts 250, 289 & 248] ** NRC states in Section 3.1.B.5, Summary, “. . . . Currently, Unit 1 is defueled and is scheduled to restart in 2007. However, the proposed amendment and the UFSAR revision are applicable to the three units. TVA stated that the fuel supplier for Unit 1 has not been selected and may include any qualified vendor.” Unit 1 fuel is GE Nuclear Energy/Global Nuclear Fuel
75.	425.	4/14/03 9/5/03 11/7/03	TS 5.6.5, COLR References – Framatome Fuel		X***	2&3	SER – 12/30/03 [Amdmts: 287 & 245] *** Since Unit 1 is using GE fuel, no TS change is required.
76.	426.		Unit 1 – 14-day Diesel Generator Allowed Outage Time (AOT)		X****	1	****TS request withdrawn – TS required to resolve differences between Unit 1 and Unit 2/3

ATTACHMENT I

Comparison of TS Amendments Requests

	TS No [Internal Tracking No]	Submittal Date(s)	Title/Description	Delta Created Between U1 & U2/U3		Unit	Comments/Disposition
				Yes	No		
77.	427.	7/8/04 4/15/05	Deletion of LPCI MG Sets	X*		1	SER – 6/20/05 [Amdmt: 254] – The amendment removes the requirement to maintain an automatic transfer capability for the power supply to the Low Pressure Coolant Injection inboard injection and recirculation pump discharge valves. *See TS-429 for U2, U3
78.	428.	12/6/04	PT Curves		X	1	SER – 6/26/06 [Amdmt: 256]
79.	429.		Deletion of LPCI M-G Sets		X	2&3	This mod is planned in upcoming Unit 2 and Unit 3 outages.
80.	430.	11/10/03 11/8/04	Power Range Neutron Monitor (PRNM) Upgrade with Implementation of Average Power Range Monitor (APRM) and Rod Block Monitor (RBM)		X	1	
81.	431.	6/28/04 8/23/04\	Extended Power Uprate Operation		X	1	
82.	432.	10/12/04 7/7/06	Completion of License Condition 2.C(4) and Miscellaneous I& C Changes		N/A	1	Response due to NRC 7/7/06 letter
83.	433.	8/16/04	24 Month Fuel Cycle		X	1	
84.	434.	3/9/04	Allowable Value for Reactor Vessel Water Level – Low Level 3		X	1	
85.	435.	8/2/04	Containment Air Dilution (CAD) AOT		X	1	SER – 7/18/05 [Amdmt: 255] This TS change provides 7 days of continued operation where two trains of the containment Atmosphere Dilution subsystems are inoperable.
86.	436.	7/9/04	Main Steam Isolation Valve (MSIV) Leakage Rate Limits and Exemption from 10 CFR 50, App. J		X	1	
87.	437.	11/3/03 4/5/06	Scram Discharge Instrument Volume Setpoint Change		X	1	
88.	438.	10/12/04	Excess Flow Check Valve Surveillance Intervals		X	1	

ATTACHMENT 1

Comparison of TS Amendments Requests

	TS No [Internal Tracking No]	Submittal Date(s)	Title/Description	Delta Created Between U1 & U2/U3		Unit	Comments/Disposition
				Yes	No		
89.	439.	Not yet Submitted	Request for Revision to the Reactor Pressure Vessel Material Surveillance Program			1	Not required for restart. Projected Submittal Date: TBD
90.	440.		RWCU/MSVV Temperature – Channel Calibration	X		1	Deleted – Incorporated into TS-447
91.	441.	9/18/03 12/8/03	PT Curve Update	X*		2&3	SER – 3/10/04 [Amdmts 288 & 247] * U1 TS-428, submitted 12/6/04 covers this TS Change SER issued: 7/26/06
92.	442.	7/25/03	TSTF 404 – Scram Discharge Volume	X		1, 2 & 3	SER – 11/3/03 [Amdmts: 248, 285, & 243]
93.	443.	1/6/06	OPRM	X		1	
94.	444.	Not yet Submitted	Maximum Extended Load Line Limit Analysis Plus (MELLA+)			1	Not required for restart. Projected submittal date: TBD
95.	445.	10/1/03 12/19/03	Safety Limit Minimum Critical Power Ratio, (SLMCPR)	X**		3	SER – 2/24/04 [Amdmt: 246] ** U1 TS-455, “Safety Limit Minimum Critical Power Ratio, (SLMCPR),” submitted 5/1/06 covers this TS Change
96.	446.	Not yet Submitted	Extended Operating Domain			2&3	Not required for Unit 1 restart. Projected Submittal Date: TBD
97.	447.	8/16/04 3/11/05 11/4/05 4/14/06	Calibration Interval Extension for HPCI/RCIC/RWCU Temperature Loops	X		1, 2 & 3	
98.	448.	7/8/04 11/24/04	One-Time Frequency Extension for Containment ILRT Interval	X		2&3	SER – 3/9/05 [Amdmts: 393 & 252] One time only, not required for Unit 1.
99.	449.	7/2/04	Elimination of Requirements to Provide Monthly Operating Report (MOR) and Annual Occupational Radiation Exposure Reports (ORER)	X		1, 2 & 3	SER – 1/25/05 [Amdmts: 252, 291, and 250]

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Comparison of TS Amendments Requests

	TS No [Internal Tracking No]	Submittal Date(s)	Title/Description	Delta Created Between U1 & U2/U3		Unit	Comments/Disposition
				Yes	No		
100.	450.	7/29/05	Extension of Rod Scram Testing Frequency from 120 Days to 200 Days	X*		1*, 2 & 3	SER – 1/9/06 [Amdmts: 295 & 253] *NRC states in SER: “. . . By letter dated 9/20/05, the NRC informed TVA that the NRC staff finds that the information presented for BFN, Unit 1, does not support review of this request under the CLIP, as no actual plant-specific data for BFN, Unit 1, was provided.” Not required for Unit 1 restart. Projected Submittal Date: TBD
101.	451.	Not yet submitted	CREV HEPA Filters			1, 2 & 3	
102.	452.	4/26/05 4/29/05	Low Pressure Emergency Core Cooling System (ECCS) Allowed Outage Time (Temporary Revision)		X	2	SER – 5/9/05 [Amdmt: 294] This proposed amendment [submitted on an emergency basis] revises the completion time for the action associated with an inoperable low pressure Emergency Core Cooling System injection/spray system to 14 days on a one-time basis.
103.	453.	1/10/06	Instrument Setpoint Methodology		X	1, 2 & 3	
104.	454.	11/21/05 11/22/05	One-Time Extension to Low Pressure Emergency Core Cooling System (ECCS) Time (Withdrawn by 11/22/05 Letter to NRC)		X	2	Emergency TS Request withdrawn.
105.	455.	5/1/06	Reactor Core Safety Limit Minimum Critical Power Ratio, (SLMCPR)		X	1	
106.	TBD		AST Turbine Building Seismic Ruggedness Evaluation – License Condition from TS-405			1	Projected Submittal date: Prior to restart.

ATTACHMENT 2

License Condition 2.C(4) Improved Technical Specifications (ITS) NRC SER Cover Letter Items

The items below were listed in a NRC letter, dated July 14, 1998¹⁶, (NRC ITS SER), as changes that the NRC reviewed and approved as part of the conversion to Improved Technical Specifications (ITS) but were identified as being beyond the scope of the conversion. These items were reviewed by TVA to determine if there were any additional outstanding items specific to Unit 1. (Note: There was no issue numbered 8 in the NRC July 14, 1998 letter) The following provides additional detail for each item. In addition to the twelve items listed by NRC as beyond the scope of the conversion, Item 13 has been added to this attachment to address the "Example" (i.e., main steam safety/relief valve setpoint tolerance of plus or minus 3 percent) mentioned by NRC in the July 7, 2006, letter, as requiring additional information.

- 1. Plant specific application of the NRC approved generic methodology (BWROG topical report) supporting instrument surveillance intervals and allowed outage times.*

In ITS, TVA referred to several BWROG Licensing Topical Reports (LTRs) used to justify the Surveillance Test Intervals (STIs) and Allowed Outage Times (AOTs) for instrument systems. The BWR LTRs established the generic basis for supporting the plant specific TS change. For Unit 2, TVA contracted GE to perform an assessment of the LTRs for the instrument configuration on Unit 2. For Unit 3, TVA performed a similarity analysis between Unit 2 and Unit 3 instrumentation systems and concluded that the GE evaluations were applicable to Unit 3. TVA's December 11, 1997 letter provided assessments for Unit 2 and 3 that conclude the generic analysis were applicable to BFN. BFN is performing a similar analysis for Unit 1. This information will be provided by October 16, 2006.

¹⁶ NRC letter, L. Raghavan to J.A. Scalice dated July 14, 1998, "Amendment Nos. 234, 253 and 212 to Facility Operating License Nos. DPR-33, DPR-52 and DPR-68: Regarding Conversion to Improved Standard Technical Specifications for the Browns Ferry Nuclear Plant, Units 1, 2 and 3 (TAC Nos. M96431, M96432 and M96433)."

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License Condition 2.C(4) Improved Technical Specifications (ITS) NRC SER Cover Letter Items

- 2. Elimination of zonal concept (three reactor zones and a refuel zone) within the secondary containment zone and instead establishing a single secondary containment zone for secondary containment isolation.*

The BFN Custom Technical Specifications (CTS) had an alternative that in the event of a loss of secondary containment operability in the common refueling zone, the refueling zone could be isolated from the three reactor building ventilation zones and power operation continue indefinitely. As part of the conversion to ITS BFN adopted the standard Limiting Condition of Operation that requires refueling zone operability be restored within four hours or the units be shutdown in accordance with the NUREG-1433 standard times for secondary containment inoperability. This applies to all three units. No additional actions required for Unit 1 restart.

- 3. Number of residual heat removal pumps required to be operable under certain conditions.*

A non-conservative Limiting Condition of Operation was discovered during the transition to ITS. BFN's FSAR states that six Residual Heat Removal Service Water (RHRSW) pumps are required to supply service water to the RHR coolers following a design basis event (with three units operating). The BFN CTS in 1997 required seven pumps for the RHR cooling safety function. The CTS allowed certain combinations of RHRSW pumps and diesel generators (DG) that could result in the loss of two RHRSW pumps for a single failure of a DG. The loss of two RHRSW pumps, depending on the number of operating units, could result in less than the number of operable RHRSW pumps required to support the RHR cooling function. TS-395 (for Unit 1, 2 and 3) was submitted December 30, 1997. TS-395 revised the CTS and ITS for all three units. This change was incorporated into ITS.

- 4. Number of emergency core cooling system subsystems required to be operable during shutdown to provide sufficient makeup capability.*

The BFN CTS bases minimum requirement at atmospheric pressure was one supply of makeup water to the core. Therefore,

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License Condition 2.C(4) Improved Technical Specifications (ITS) NRC SER Cover Letter Items

sufficient makeup water can be provided by two Core Spray (CS) subsystems, two RHR subsystems or one CS and one RHR subsystem. The change was consistent with NUREG -1433, Standard Technical Specifications General Electric Plants, BWR/4. This change was made for all three units. No further actions are required for Unit 1 restart.

5. *For BFN Unit 2 only, installation of the Power Range Neutron Monitoring System, Average Power Range Monitor and Rod Block Monitor TS improvements, and the Maximum Extended Load Limit Analysis.*

This change was applicable to Unit 2 only. A similar change specific to Unit 1 (TS-430) was requested by letter dated November 10, 2003. This change is under review by NRC.

6. *Revising reactor vessel water level to specify that the level be maintained greater than the top of active irradiated fuel instead of specifying actual water level.*

The BFN CTS for all three units specified an actual water level (372.5" above vessel zero) as the Safety Limit. The ITS did not specify an actual level but required water level greater than the top of active fuel (TAF). The change was consistent with NUREG-1433, Standard Technical Specifications General Electric Plants, BWR/4. This change was made for all three units. No further actions are required for Unit 1 restart.

7. *Deleting the average U-235 enrichment of [4.5] weight percent requirement from the spent and the new fuel storage racks design.*

BFN has three spent fuel storage pools, one per reactor. BFN uses high density spent fuel racks in each pool. This change was made for all three units. No further actions are required for Unit 1 restart.

9. *TS changes to allow spiral off-load procedures and adopt a revision to surveillance requirement for count rate verification during spiral loading.*

ITS revised the number of Source Range Monitor (SRM) channels required to be operable during refueling from 2 to 1 if a

ATTACHMENT 2

License Condition 2.C(4) Improved Technical Specifications (ITS) NRC SER Cover Letter Items

spiral offload or reload pattern is used. This reduction was found acceptable because the use of a spiral pattern provides assurance that the operable SRM is in the optimum position for monitoring changes in neutron flux levels resulting from the Core Alteration. The change was consistent with NUREG -1433, Standard Technical Specifications General Electric Plants, BWR/4. This change was made for all three units. No further actions are required for Unit 1 restart.

10. *Extension of the surveillance frequency for reactor anomalies.*

CTS required the core reactivity difference between actual and expected critical rod configuration be compared every effective full power month. As part of the conversion, BFN proposed to extend this surveillance to every 1000 Megawatt-Days per Ton (MWD/T). NRC found the proposed frequency acceptable based on the relatively slow change in core reactivity with exposure and industry operating experience related to variations in core reactivity. The change was consistent with NUREG -1433, Standard Technical Specifications General Electric Plants, BWR/4. This change was made for all three units. No further actions are required for Unit 1 restart.

11. *Changing the Surveillance Requirements (SRs) for BFN Unit 3 only, to allow position verification of either the motor-operated or the manual shutoff valve for ensuring that the Low Pressure Coolant Injection System cross-tie flow path is isolated.*

This change is applicable to Unit 3 only because of a plant specific configuration applicable to Unit 3 only. No action required for Unit 1 restart.

12. *Changing the calibration frequency of the low power range monitors to every 1000MWD/T instead of every 1000 effective-full-power-hours average core exposure to match NUREG-1433.*

CTS specified a calibration frequency for the Local Power Range Monitors of every 1000 effective-full-power-hours (EFPH). As part of the conversion to ITS, the calibration frequency was changed to 1000 MWD/T to match NUREG-1433. This change constituted an approximate 11% increase in the interval between calibrations. The 1000 EFPH calibration interval was

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License Condition 2.C(4) Improved Technical Specifications (ITS) NRC SER Cover Letter Items

based on an older modeling methodology and older LPRM designs. Current calibration and exposure data show a significant reduction in the uncertainty associated with LPRM sensitivity as a function of exposure. The change was consistent with NUREG-1433, Standard Technical Specifications General Electric Plants, BWR/4. New methodology and LPRMs were used in Unit 1. This change was made for all three units. No Unit 1 action required.

13. *Safety / Relief Valve Setpoint Requirements*

The setpoint tolerance and the applicable Bases for the Unit 1 safety/relief valve (SRV) was increased from 1% to 3% by ITS (SR 3.4.3.1). Previous TS change requests had been approved for Units 2 and 3. At the time this change for Unit 1 was not supported by design basis documentation. The design basis documentation was provided in the transient analysis performed for Unit 1 Extended Power Uprate. This analysis is summarized in section 3 of the Browns Ferry Unit 1 Safety Analysis Report for Extended Power Uprate. This was provided as Enclosure 4 to TVA letter dated June 28, 2004¹⁷.

¹⁷ TVA letter, T. E. Abney to NRC dated June 28, 2004 "Unit 1 - Proposed Technical Specification (TS) Change TS-431 - Request for License Amendment - Extended Power Uprate (EPU) Operation"