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

MAR 31 1994

TVA-BFN-TS-339 10 CFR 50.90

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

Gentlemen:

In the Matter of	)	Docket Nos. 50-259
Tennessee Valley Authority	)	50-260
		50-296

BROWNS FERRY NUCLEAR PLANT (BFN) - UNITS 1, 2, AND 3 - TECHNICAL SPECIFICATION (TS) NO. 339 - EXTENDED LOAD LINE LIMIT AND REVISED ROD BLOCK MONITOR OPERABILITY REQUIREMENTS (UNITS 1 AND 3); DELETION OF SPECIFIC VALUE FOR RATED REACTOR LOOP RECIRCULATION FLOW RATE AND RELOCATION OF ROD BLOCK EQUATIONS TO CORE OPERATING LIMITS REPORT (UNITS 1, 2, AND 3)

References:

1. NRC letter to TVA, dated December 18, 1990, Issuance of Amendment (TAC No. 76934)(TS 285)

2. NRC letter to TVA, dated October 21, 1993, Issuance of Technical Specification Amendments Regarding Flow-Biased Rod Block Monitor Upscale Setpoint (TAC No. M84395) (TS 303)

3. TVA letter to NRC, dated December 23, 1993, Technical Specification (TS) Approval Schedule to Support Unit 3 Restart

In accordance with the provisions of 10 CFR 50.4 and 50.90, TVA is submitting a request for an amendment (TS-339) to licenses DPR-33, DPR-52, and DPR-68 to change the TSs for Units 1, 2, and 3. The primary purpose of the proposed

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change is to increase operational flexibility and efficiency of Units 1 and 3 by expanding the allowable operating domain on the power/flow map above the rated rod line (to the area referred to as the extended load line limit region), and revising the rod block monitor (RBM) operability requirements to permit future changes to the RBM upscale setpoint. These proposed changes are consistent with changes NRC has previously approved for BFN Unit 2 in References 1 and 2. TVA is also proposing editorial changes to the Units 1, 2, and 3 TS to maintain consistency between the specifications.

The proposed change would delete a parenthetical phrase from the Units 1, 2, and 3 TS which provides a specific numerical value for the rated reactor loop recirculation flow rate. The specific value was accurate at the time of its inclusion in the TS, but is no longer accurate due to changes in core internal resistance and component aging. The specific value was originally included in the TS to provide additional information in defining a factor used in equations for determining limiting safety system settings.

Finally, the proposed change relocates the average power range monitor rod block setpoint, and the RBM upscale setpoint and clipped (maximum) value, from the TS to the Core Operating Limits Report. This change is consistent with the recommendations of NRC Generic Letter 88-16, "Removal of Cycle-Specific Parameter Limits From Technical Specifications."

TVA has determined that there are no significant hazards considerations associated with the proposed change and that the change is exempt from environmental review pursuant to the provisions of 10 CFR 51.22(c)(9). The BFN Plant Operations Review Committee and the BFN Nuclear Safety Review Board have reviewed this proposed change and determined that operation of BFN Units 1, 2, and 3 in accordance with the proposed change will not endanger the health and safety of the public. Additionally, in accordance with 10 CFR 50.91(b)(1), TVA is sending a copy of this letter and enclosures to the Alabama State Department of Public Health.

Enclosure 1 to this letter provides the description and evaluation of the proposed change. This includes TVA's determination that the proposed change does not involve a

significant hazards consideration, and is exempt from environmental review. Enclosure 2 contains copies of the appropriate TS pages from Units 1, 2, and 3 marked-up to show the proposed change. Enclosure 3 forwards the revised TS pages for Units 1, 2, and 3 which incorporate the proposed change.

This amendment is needed to support Unit 3 restart. In Reference 3, TVA provided need dates for NRC approval of those TS changes needed to support Unit 3 restart. Consistent with the information provided in that letter, TVA requests NRC approval of this amendment by May 3, 1995. As noted in Reference 3, TVA will inform NRC of any significant changes to this need date through BFN's regular communications with the Staff's Project Managers for BFN.

TVA requests that the revised TS be made effective within 30 days of NRC approval. If you have any questions about this change, please telephone me at (205) 729-2636.

Sincerely,

Pedro Salas
Manager of Site Licensing

Enclosures
cc: See page 4

Subscribed and sworn to before me
on this 31st day of MARCH 1994.

Barbara A. Blanton
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ENCLOSURE 1

TENNESSEE VALLEY AUTHORITY
BROWNS FERRY NUCLEAR PLANT (BFN)
UNITS 1, 2, AND 3

PROPOSED TECHNICAL SPECIFICATION (TS) CHANGE TS-339
DESCRIPTION AND EVALUATION OF THE PROPOSED CHANGE

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I. DESCRIPTION OF THE PROPOSED CHANGE

The proposed change to the Units 1, 2, and 3 Technical Specifications (TS) consists of five parts. Part A revises the Units 1 and 3 TS to expand the allowable operating region. NRC previously approved this change for Unit 2. Part B adds new operability and surveillance requirements for the rod block monitor (RBM) subsystem. NRC previously approved this change for Unit 2. Part C revises the Units 1, 2, and 3 TS to make various administrative (editorial) changes. NRC previously approved many of these editorial changes for Unit 2. Part D revises the Units 1, 2, and 3 TS to delete the specific value for the rated loop recirculation flow rate. Part E revises the Units 1, 2, and 3 TS to relocate the average power range monitor (APRM) flow-biased rod block and RBM upscale setpoint equations from the TS to the Core Operating Limits Report (COLR).

Part A: Part A of the proposed change improves operating flexibility by expanding the allowable operating domain. This expansion is accomplished by revising the equations for the flow-biased APRM flux scram trip setting and the APRM rod block trip setting (although Part E relocates the APRM rod block trip setting from the TS to the COLR). Use of the revised equations extends the allowable operating domain into the region referred to as the extended load line limit (ELLL) region. Implementation of the revised equations requires the following changes to the Units 1 and 3 TS (unless otherwise specified, the page listed is for both Units 1 and 3).

1. Page 1.1/2.1-2, Limiting Safety System Setting 2.1.A.1.a, the equation for the flow biased APRM Flux Scram Trip Setting currently reads:

   $$S \leq (0.66W + 54\%)$$

   The proposed change revises the equation to read:

   $$S \leq (0.58W + 62\%)$$

2. The proposed change replaces existing Figure 2.1-2, "APRM Flow Bias Scram Vs. Reactor Core Flow," on page 1.1/2.1-7 with a new figure of the same title.

3. Page 1.1/2.1-14, Bases 2.1.B, "APRM Control Rod Block," the last full sentence currently reads:

   > "The flow variable trip setting provides substantial margin from fuel damage, . . . , over the entire recirculation flow range."

The proposed change deletes the words "recirculation flow range" and adds the highlighted text so the sentence reads as follows:

> "The flow variable trip setting provides substantial margin from fuel damage, . . . , over the entire power/flow domain including above the rated rod line (Reference 1)."

Part B: Part B of the proposed change revises the RBM limiting conditions for operation (LCOs) to require two RBM channels to be operable if the plant is operating with low thermal margins. TVA is also revising the RBM surveillance requirements (SRs). The revised LCOs and SRs will permit future changes to the RBM upscale trip setpoint, which will improve operational flexibility.

To support the new LCOs and SRs, TVA is adding new definitions for Core Maximum Fraction of Critical Power and Limiting Control Rod Pattern. These new definitions will allow the LCOs and SRs to be described in terms of thermal parameters that are consistent with the applicable analyses and are currently used in BFN procedures. The new definitions reflect common industry terminology currently used in BFN procedures, and are consistent with the Unit 2 definitions, which NRC previously approved. The new definition of Limiting Control Rod Pattern is consistent with the definition found in the General Electric Boiling Water Reactor (BWR) Standard TS. These changes are provided below (unless otherwise specified, the page listed is for both Units 1 and 3).

1. The proposed change adds a new definition 1.U.5 to page 1.0-7, "Definitions," as follows:

   5. CORE MAXIMUM FRACTION OF CRITICAL POWER (CMFCP) - CORE MAXIMUM FRACTION OF CRITICAL POWER is the maximum value of the ratio of the flow-corrected CPR operating limit found in the CORE OPERATING LIMITS REPORT divided by the actual CPR for all fuel assemblies in the core.

2. The proposed change adds a new definition 1.OO to page 1.0-12a, "Definitions," as follows:

   OO. LIMITING CONTROL ROD PATTERN - A LIMITING CONTROL ROD PATTERN shall be a pattern which results in the core being on a thermal limit, i.e. operating on a limiting value for APLHGR, LHGR, or MCPR.

3. Page 3.3/4.3-8, LCO 3.3.B.5 currently reads:

> "During operation with limiting control rod patterns, as determined by the designated qualified personnel, either:"

The proposed change deletes the words "limiting control rod patterns, as determined by the designated qualified personnel" and adds the highlighted text so the SR reads as follows:

> "During operation with CMFCP or CMFLPD equal to or greater than 0.95, either:"

4. Page 3.3/4.3-8, SR 4.3.B.5 currently reads:

> "When a limiting control rod pattern exists, an instrument . . ."

The proposed change deletes the introductory phrase and adds the highlighted text so the SR reads as follows:

> "During operation with CMFCP or CMFLPD equal to or greater than 0.95, an instrument . . ."

5. Page 3.3/4.3-17, Bases 3.3.B.5/4.3.B.5, the existing second (last) paragraph currently reads:

> "A limiting control rod pattern is a pattern which . . . designated by the plant superintendent to perform these functions."

The proposed change deletes this paragraph.

6. Page 3.5/4.5-19, SR 4.5.K.1, the SR currently reads:

> "MCPR shall be checked . . . operation with a limiting control rod pattern as described in the bases for Specification 3.3."

The proposed change deletes the words "as described in the bases for Specification 3.3" from the end of the SR. The proposed change also revises the words "limiting control rod pattern" from lower case to upper case as a result of making this term a TS definition. The revised SR reads as follows:

> "MCPR shall be checked . . . operation with a LIMITING CONTROL ROD PATTERN."

Part C: Part C of the proposed change includes several miscellaneous editorial changes to the BFN Units 1, 2, and 3 TS. These changes are listed below. The page number listed is for both Units 1 and 3 unless otherwise specified.

1. Page 1.1/2.1-12, Bases 2.1.A.1, "APRM Flow-Biased High Flux Scram Trip Setting (Run Mode)," the first line of the second paragraph currently reads:

   "During transients, the instantaneous . . ."

   The proposed change adds the words "power increase" so that the sentence reads:

   "During power increase transients, the instantaneous . . ."

2. Page 1.1/2.1-12, Bases 2.1.A.1, the second-to-last sentence in the second paragraph currently reads:

   "Therefore, the flow biased provides additional margin . . ."

   The proposed change adds the word "scram" so that the sentence reads:

   "Therefore, the flow biased scram provides additional margin . . ."

3. Page 1.1/2.1-14, Bases 2.1.A.3, "IRM Flux Scram Trip Setting," lines 12 and 13 currently read:

   ". . . that heat flux is in equilibrium with the neutron flux and an IRM scram . . ."

   The proposed change deletes the word "and" and splits the sentence into two sentences to read as follows:

   ". . . that heat flux is in equilibrium with the neutron flux. An IRM scram . . ."

4. Page 1.1/2.1-16, Bases 2.1.G & H, "Main Steam Isolation on Low Pressure and Main Steam Line Isolation Scram," the second sentence currently reads:

   "Advantage is taken of the scram feature that occurs when the main steam isolation valves are closed, to provide for reactor shutdown so that high power operation . . ."

   The proposed change deletes the highlighted text and replaces it with the following:

"The scram feature that occurs when the main steam line isolation valves close shuts down the reactor so that high power operation . . ."

5. Page 3.2/4.2-26 (Unit 1) and 3.2/4.2-25 (Unit 3), Note 7.a currently reads:

   "Both RBM channels are bypassed when reactor power is ≤30 percent and when . . ."

   The proposed change substitutes the word "or" for "and" so the note reads:

   "Both RBM channels are bypassed when reactor power is ≤30 percent or when . . ."

6. Unit 2 pages 3.2/4.2-26 and 27, delete notes 7.e and 7.f (temporary notes which applied during Unit 2, Cycle 6 only), the associated note on the bottom of pages 3.2/4.2-26 and 3.2/4.2-27, and the statements referencing Notes 7.e and 7.f in Notes 7.c and 7.d.

7. Unit 2 page 3.2/4.2-68, the third paragraph currently reads:

   "A General Electric Study . . . minimum instrument channel requirements apply. These requirements assure sufficient instrumentation . . . sequence for withdrawal of control rods."

   The proposed change deletes the discussion at the beginning of the paragraph associated with the General Electric Study (the first three sentences), and replaces the word "These" (highlighted above) with the words "The minimum instrument channel". The revised paragraph reads as indicated below. The proposed change also corrects the page number.

   "The minimum instrument channel requirements assure sufficient instrumentation to assure the single failure criteria . . . sequence for withdrawal of control rods."

8. Page 1.0-8, Definitions 1.V.4 and 1.V.5; and Page 3.2/4.2-27 (Unit 1) and 3.2/4.2-26 (Unit 3), Notes 9 and 12 for Table 3.2.C; change the words "operable" and "operability" (in lower case) to "OPERABLE" and "OPERABILITY" (upper case).

9. Page 1.1/2.1-12, Bases 2.1.A.1, change the word "Run" in the title to "RUN" (all upper case).

10. Pages 1.1/2.1-14 and -16, Bases 2.1.A.3, 2.1.A.4, 2.1.B, and 2.1.G. & H., change the words "safety limit" to "SAFETY LIMIT" (in upper case).

11. Page 1.1/2.1-16, Bases 2.1.G. & H., change the word "STARTUP" (in upper case) to "startup" (in lower case).

12. Page 3.3/4.3-8, LCO 3.3.B.3.c, change the word "run" in line 5 to "RUN" (upper case).

Part D: Part D of the proposed change revises the Units 1, 2, and 3 TS to delete the specific value for the rated loop recirculation flow rate. This value was accurate at the time of its inclusion in the TS; however, it is no longer accurate and continues to increase as the plant ages. The specific value (34.2×10^6 lb/hr) was provided in a parenthetical phrase to provide additional information in defining the factor "W," the loop recirculation flow rate in percent of rated flow rate. The factor "W" is used to determine the neutron flux trip settings in the limiting safety system settings. The specific change to delete this value is provided below.

Units 1, 2, and 3 page 1.1/2.1-2, Limiting Safety System Setting 2.1.A.1.a, uses the factor "W" to calculate the APRM flow-biased flux scram trip setting. This factor is currently defined as follows:

> W = Loop recirculation flow rate in percent of rated (rated loop recirculation flow rate equals 34.2×10^6 lb/hr)

The proposed change deletes the highlighted parenthetical phrase.

Part E: Part E of the proposed change revises the Units 1, 2, and 3 TS to relocate the specific equations for the APRM rod block and RBM upscale setpoint equations from the TS to the Core Operating Limits Report (COLR). This part of the proposed change is an administrative change which implements the recommendations of NRC Generic Letter 88-16, "Removal of Cycle-Specific Parameter Limits From Technical Specifications." This change will reduce the burden on TVA and NRC resources associated with processing future TS amendments to revise these equations. Relocating the equations necessitates additional changes to other TS requirements and bases. These changes are provided below (unless otherwise specified the page number listed is for Units 1, 2, and 3).

1. Page viii, List of Illustrations, delete Figure 2.1-1 from the list.

2. Page 1.1/2.1-3, Limiting Safety System Setting (LSSS) 2.1.A.1.c currently provides an equation for the APRM Rod Block trip setting and the definitions of the factors used in the equation. The proposed change deletes the equation and the definitions of the factors and replaces this information with a reference to the COLR. The revised LSSS 2.1.A.1.c reads as follows:

   c. The APRM Rod Block trip setting shall be less than or equal to the limit specified in the CORE OPERATING LIMITS REPORT.

3. Page 1.1/2.1-6, Figure 2.1-1, "APRM Flow Reference Scram and APRM Rod Block Settings," is deleted.

4. Page 1.1/2.1-15, Bases 2.1.B, "APRM Control Rod Block," the first full sentence on the page currently reads as follows:

   ". . . flow relationship; therefore, the worst case MCPR which could occur during steady-state operation is at 108 percent of rated thermal power because of the APRM rod block trip setting."

   The proposed change replaces the highlighted text and revises this sentence to read as follows:

   "The margin to the Safety Limit . . . versus flow relationship; therefore, the worst case MCPR which could occur during steady-state operation is at the maximum thermal power level permitted by the APRM rod block trip setting, which is found in the CORE OPERATING LIMITS REPORT."

5. Units 1 and 2 page 3.2/4.2-25, and Unit 3 page 3.2/4.2-24, Table 3.2.C, "Instrumentation That Initiates Rod Blocks," currently specifies an equation for the APRM Upscale (Flow Bias) trip setting and references Note 2. The proposed change deletes this equation but retains the reference to Note 2.

6. Table 3.2.C also specifies an equation for the RBM Upscale (Flow Bias) trip setting, with references to Notes 2 and 13. The proposed change deletes this equation and the reference to Note 2, but retains the reference to Note 13.

7. Units 1 and 2 page 3.2/4.2-26, and Unit 3 page 3.2/4.2-25, Notes for Table 3.2.C, Note 2 currently provides additional information associated with the APRM rod block and RBM upscale trip setpoint equations. For Unit 1, the note also provides

information that is currently found in LCO 3.5.L. Additionally, for Units 1 and 3, the note states that the APRM control rod block setpoint can be found in Section 2.1. The proposed change deletes the existing text in Note 2 for Units 1, 2, and 3 and replaces it with the following:

> 2. The trip level setting shall be as specified in the CORE OPERATING LIMITS REPORT.

8. Unit 1 page 3.2/4.2-27, Unit 2 page 3.2/4.2-27a, and Unit 3 page 3.2/4.2-26, Notes for Table 3.2.C, Note 13 currently provides the clipped value for the RBM upscale trip setpoint. The proposed change revises the note to read as follows:

> 13. The trip level setting and clipped value for this setting shall be as specified in the CORE OPERATING LIMITS REPORT.

9. Page 3.5/4.5-20, LCO 3.5.L.1 currently reads:

> "Whenever the core thermal power . . . or the APRM scram and rod block setpoint equations listed in Sections 2.1.A and 2.1.B shall be multiplied by FRP/CMFLPD as follows:
>
> $S \leq (0.66W + 54\%)$ FRP/CMFLPD
>
> $S_{RB} \leq (0.66W + 42\%)$ FRP/CMFLPD"

The equations listed above are the current Units 1 and 3 equations - the equations for Unit 2 are slightly different. The proposed change deletes the specific equations and modifies the LCO to read as follows:

> "Whenever the core thermal power . . . or the APRM scram setpoint equation listed in Section 2.1.A and the APRM rod block setpoint equation listed in the CORE OPERATING LIMITS REPORT shall be multiplied by FRP/CMFLPD."

10. The proposed change would add items (4) and (5), as provided below, to TS 6.9.1.7.a on page 6.0-26a.

> (4) The APRM Flow Biased Rod Block Trip Setting for Specification 2.1.A.1.c, Table 3.2.C, and Specification 3.5.L.
>
> (5) The RBM Upscale (Flow Bias) Trip Setting and clipped value for this setting for Table 3.2.C.

II. REASON FOR THE PROPOSED CHANGE

Parts A and B: During power ascension from the low power/low core flow condition to the high power/high core flow condition, several factors can limit operational flexibility of BFN Units 1 and 3. If the rated load line control rod pattern is maintained as core flow is increased, the difference in equilibrium xenon concentrations will result in less than rated power at rated core flow. Second, fuel pellet-cladding interaction considerations can inhibit control rod withdrawal at high power levels. Control rod withdrawal can also be inhibited by the rod block monitor (RBM) subsystem, since the RBM upscale setpoint is more restrictive than the average power range monitor (APRM) flow-biased rod block setpoint. These factors can cause difficulty in attaining rated core power in a reasonable time period. Furthermore, once rated core power is achieved, periodic control rod adjustments must also be made to compensate for reactivity changes due to xenon effects and fuel burnup.

These limitations can be overcome by allowing operation with a control rod pattern that requires fewer adjustments when ascending to full power, and by permitting operation at rated power with less than rated core flow. This requires expansion of the current allowable power/flow operating region to allow operation above the rated rod line in the area referred to as the extended load line limit region (Part A), and increasing the RBM upscale setpoint (Part B).[1] This will allow the plant to operate in a more efficient and economical manner.

Part C: The first group of editorial changes for Units 1 and 3 (changes 1-4) were previously approved by NRC for Unit 2. These editorial changes will improve the clarity of the Units 1 and 3 technical specifications (TS) and will maintain consistency with the Unit 2 TS.

TVA is proposing the second group of editorial changes for Units 1, 2, and 3 (changes 5, 6 and 7) to maintain consistency between the Units 1, 2, and 3 specifications. The second two changes (changes 6 and 7) also delete obsolete notes that applied to a past Unit 2 operating cycle.

TVA is proposing the third group of editorial changes for Units 1 and 3 (changes 8-12) to ensure that TS definitions,

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[1] Part B actually does not increase the RBM upscale setpoint. Part B proposes changes to the Units 1 and 3 TS to add operability and surveillance requirements which will support future increases in the setpoint. As noted in Part E (below), TVA is planning to increase the RBM upscale setpoint prior to Unit 3 restart.

used in the body of the TS, are written in all capital letters. This indicates to the reader that the term is a TS definition. Consistent with this philosophy, some terms which are not TS definitions are being changed from all capital letters to lower case. These changes will improve the clarity of the Units 1 and 3 TS. These changes are consistent with the General Electric BWR Standard TS and with the BWR Improved Standard TS (NUREG-1433).

Part D: The value for rated loop recirculation flow rate (also known as "recirculation drive flow" or simply "drive flow") provided in the parenthetical phrase found in the TS (34.2×10^6 lb/hr) is no longer accurate. This value was originally included in the TS to provide additional information in defining the factor "W" (loop recirculation flow rate in percent of rated) and was accurate at the time of its inclusion in the TS.

Due to changes in core internal resistance and component aging, the amount of drive flow required to achieve 100% of rated core flow (102.5×10^6 lb/hr) increases as the plant ages. The actual drive flow used by TVA is calculated per plant procedure during the core flow calibration performed at the beginning of each operating cycle. Since this value will continue to change, and is updated each cycle and maintained in plant procedures, TVA proposes to remove the value from the TS. Removal of this value is consistent with the General Electric BWR Standard TS and with the BWR Improved Standard TS (NUREG-1433).

Part E: Under current TS requirements, TVA must revise the TS to change either the APRM rod block or RBM upscale trip setpoint equations. Processing these TS amendments requires significant resource allocations for both TVA and NRC. NRC Generic Letter (GL) 88-16, "Removal of Cycle-Specific Parameter Limits From Technical Specifications," proposed an alternative which eliminates the need to process such TS changes.

The alternative described in GL 88-16 involves removing cycle-specific parameter limits from the TS. These cycle-specific limits will be maintained in the Core Operating Limits Report (COLR), which is currently addressed by TS 6.9.1.7.

Although the APRM rod block and RBM upscale trip setpoint equations may not change each cycle, TVA performs cycle-specific analyses which could impact these equations. Prior to Unit 3 restart, TVA is planning to increase both the APRM and RBM rod block equations to increase

operational flexibility.[2] TVA expects that these equations will be similar to the equations NRC previously approved for Unit 2. For Unit 1 restart, TVA expects to perform similar changes to the APRM and RBM rod block equations.

NRC Approval Need Date: This proposed change (Parts A through E) is needed to support Unit 3 restart. In Reference 1, TVA provided need dates for NRC approval of those TS changes needed to support Unit 3 restart. Consistent with the information provided in that letter, TVA requests NRC approval of this proposed change by May 3, 1995. As noted in Reference 1, TVA will inform NRC of any significant changes to this need date through BFN's regular communications with the Staff's Project Managers for BFN.

III. SAFETY ANALYSIS

Part A: The current BFN Units 1 and 3 TS permit operation of Units 1 and 3 in the region of the power/flow map bounded by the rated power line up to 100% power. The proposed change revises the equation for the flow-biased Average Power Range Monitor (APRM) flux scram trip setting. In conjunction with this revised equation, TVA proposes to revise the equation for the APRM rod block setting to maintain the same margin between the flux scram and rod block trips that exists in the current TS.[3] These changes permit operation in the region bounded by the new APRM rod block line up to the intersection with the 100 percent power line occurring at a flow of 87 percent. This area is referred to as the extended load line limit (ELLL) region. These changes are standard changes for operating in the ELLL region, and are consistent with the changes NRC previously approved for BFN Unit 2 (Reference 2) and with similar technical specification (TS) changes NRC has approved at other plants (References 3-9).

General Electric's Standard Application for Reactor Fuel (GESTAR-II) (Reference 10), which is an NRC approved methodology for performing reload analyses and is used at BFN, addresses operation in the ELLL region. GESTAR-II specifies that to justify operation in the ELLL region, an extended load line limit analysis (ELLLA) must be performed to determine if the safety consequences of operation above

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[2] As noted in Section III, Part A (below), increasing the APRM rod block equation is one of the changes required to permit operation in the extended load line limit region.

[3] One of the changes necessary to permit operation in the ELLL region involves establishing a new equation for the APRM rod block trip setpoint. As noted in Part E of this proposed change, TVA is proposing to relocate this equation from the TS to the Core Operating Limits Report (COLR). Accordingly, TVA is not proposing to include the revised equation in the TS.

the rated load line, but within a defined region of the power flow map, are bounded by the respective consequences of operation at the licensing basis conditions. GESTAR-II also specifies that the ELLLA is a plant and cycle specific analysis. However, after the ELLLA is initially performed for a plant and cycle, only the applicability of previous loss of coolant accident (LOCA) analyses to the ELLL region, and the consequences of abnormal operational occurrences (AOOs) need to be evaluated (in addition to the standard reload analyses) to support operation in the extended operation region for subsequent cycles.

To support the previous Unit 2 TS change, General Electric performed an ELLLA (Reference 11). This analysis evaluated the impact of Unit 2 operation in the ELLL region on applicable accident scenarios and events, and affected system components. These included overpressure protection, LOCA events, anticipated transients without scram events, containment LOCA response, thermal-hydraulic stability, and pressure differentials and vibration response on reactor internals and fuel assemblies. This analysis determined that operation of Unit 2 in the ELLL region was within allowable design limits and, therefore, will not cause design limits to be exceeded.

TVA has subsequently determined that this analysis applies to BFN Units 1 and 3 (Reference 12). Therefore, TVA has determined that the safety consequences of Unit 1 and 3 operation above the rated load line are bounded by the respective consequences of operation at the licensing basis conditions.

In Reference 13, TVA identified the limiting AOOs required to be evaluated to support operation in the ELLL region for Unit 2, Cycle 6, and for subsequent operating cycles of any BFN unit. Therefore, prior to restart of BFN Units 1 and 3, and for each subsequent Unit 1 and 3 fuel cycle, TVA will be required to evaluate these limiting AOOs and the applicability of previous LOCA analyses to operation in the ELLL region. As noted above, existing requirements in GESTAR-II ensure that TVA will perform these evaluations (i.e., these evaluations are required for each reload analysis).

Additionally, TVA is correcting typographical errors in Bases Section 2.1.A.1 and limiting condition for operation (LCO) 3.5.L.1. In Bases Section 2.1.A.1, a word was inadvertently omitted from the phrase "flow biased scram." TVA is adding references to Bases Section 2.1.L; and making editorial changes to the text of Bases Sections 2.1.A, and 2.1.G & H which do not affect the intent of the bases.

Part B: The rod block monitor (RBM) subsystem is part of the neutron monitoring system. The purpose of the RBM subsystem is to provide protection against violating applicable fuel safety limits in a local region of the core surrounding the control rod during control rod withdrawal. The RBM provides a signal to the reactor manual control system to inhibit control rod withdrawal if local power range monitor (LPRM) signals exceed a calculated setpoint. The setpoint is selected to provide protection for the worst single control rod withdrawal error (RWE) from a limiting control rod pattern under the most adverse conditions of RBM bypass and reactor operating state. Exceeding this setpoint is assumed to indicate local core conditions may be approaching a fuel safety limit.

The existing Units 1 and 3 TS LCO (Table 3.2.C) defines the flow-biased RBM upscale setpoint as:

$$\text{RBM, \% power} \leq 0.66W + 40\%$$

where W is the reactor recirculation coolant flow rate as a percentage of full flow. This equation is truncated to limit the maximum setpoint to 106% power.

This equation is used as the basis for TVA's existing analysis of the limiting RWE event. This RWE analysis assumes that one RBM channel is inoperable, since the existing TS require both channels to be operable only if the reactor is operating with a limiting control rod pattern. This assumption minimizes the sensitivity of the system and permits the greatest rod withdrawal before a block signal is generated, resulting in the largest decrease in thermal margin.

To improve operational flexibility following restart of Units 1 and 3, TVA is planning to increase the flow biased RBM upscale trip setpoint and increase the maximum allowed value for this setpoint.[4] To support the revised setpoint, TVA proposes to revise the Units 1 and 3 TS to add new definitions of Core Maximum Fraction of Critical Power (CMFCP) and Limiting Control Rod Pattern, and revise the RBM operability and surveillance requirements (SRs) in LCO 3.3.B.5 and SR 4.3.B.5. These changes were previously approved by NRC for Unit 2 in Reference 14, and are discussed below. These changes are necessary to permit operation with an increased RBM upscale trip setpoint.

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[4] TVA expects that the revised RBM upscale setpoint for Units 1 and 3 will be similar to the current Unit 2 setpoint, which was recently increased. The increased Unit 2 setpoint was reviewed and approved by NRC in Reference 14.

The new definition of CMFCP is defined as the maximum value of the flow corrected critical power ratio (CPR) found in the COLR divided by the actual CPR for all fuel assemblies in the core. CMFCP is a term currently used in the Unit 2 TS and site procedures, and is common BWR terminology.

BFN TS currently include a definition (1.U.3) of Core Maximum Fraction of Limiting Power Density (CMFLPD). This parameter is defined as the ratio of the maximum fuel rod power density for a given fuel type to the limiting fuel rod power density for that fuel type. The proposed change will allow TVA to use CMFCP and CMFLPD to quantify core thermal margin. During normal operations, these parameters will be less than one, which indicates the core has margin to thermal limits. The closer the value of CMFCP or CMFLPD to one, the lower the core thermal margin. CMFCP and CMFLPD are calculated by the plant process computer based on current core thermal-hydraulic and power distribution characteristics, and are available to plant operators. If the plant process computer is unavailable, these parameters can be calculated off-line using existing plant procedures.

TVA's proposed new definition for limiting control rod pattern, 1.OO, is consistent with the Unit 2 definition and with standard BWR terminology. Addition of this new definition requires deletion of the discussion of limiting control rod pattern from Bases Section 3.3.B.5/4.3.B.5, and deletion of the reference to this section of the bases from SR 4.5.K.1. The proposed new definition essentially replaces the deleted bases text and the reference to the bases text. Additionally, due to the deletion of the bases text, TVA proposes to revise SR 4.3.B.5. The revised SR incorporates CMFCP and CMFLPD thermal requirements with existing requirements for RBM instrument functional testing.

The current RBM operability requirements in LCO 3.3.B.5 (i.e., one RBM channel operable unless the unit is operating on a thermal limit) are sufficient to protect against violating applicable fuel safety limits during control rod withdrawal. However, these operability requirements do not provide sufficient protection with increased RBM upscale setpoints. To justify operation of Units 1 and 3 with increased RBM upscale trip setpoints, the RBM operability requirements must be revised.

The revised operability requirements will require both RBM channels to be operable whenever thermal margin, as defined by CMFCP and CMFLPD, is greater than or equal to 0.95 (i.e., thermal margin is less than or equal to five percent). The operability requirements will also require only one RBM channel to be operable if thermal margin is less than 0.95. These RBM operability requirements will ensure core thermal limits are not exceeded for a

postulated RWE event initiated from either high or low margin conditions. Accordingly, the proposed change to LCO 3.3.B.5 will continue to provide adequate protection of core thermal limits.

Part C: These editorial changes do not affect plant operation, design, or any safety-related activity or equipment. These changes correct errors and/or improve the clarity of the affected specifications, thereby increasing the probability that the specifications will be interpreted correctly.

Part D: Rated loop recirculation flow (also known as "recirculation drive flow" or just as "drive flow") is defined as that amount of recirculation system driving flow necessary for the jet pumps to achieve 100% total core flow. In Limiting Safety System Settings 2.1.A.1.a and 2.1.A.1.c, the factor "W," which is the loop recirculation flow rate in percent of rated, is used in an equation to determine the neutron flux trip settings. In this equation, a parenthetical phrase is used to provide additional information in defining "W." This phrase, which is not a TS requirement, states that the "rated loop recirculation flow rate equals 34.2×10^6 lb/hr." The value of 34.2×10^6 lb/hr was accurate at the time of its inclusion in the TS.

Due to changes in core internal resistance and component aging, the actual flow rate has increased slowly over the life of the plant (Reference 15). For example, the rated drive flow for Unit 2 was calculated at 35.3×10^6 lb/hr during Unit 2 Cycle 7 testing. This is an increase of approximately three percent (above the original value) over the life of the plant.

At BFN, the APRM flow-biased circuitry automatically calculates the APRM rod block and scram trip settings based on drive flow. In accordance with procedural requirements, at the beginning of each cycle TVA determines actual drive flow conditions at rated core flow and adjusts the APRM flow-biased circuitry to reflect actual drive flow conditions.

As a result, TVA proposes to eliminate the phrase which provides the specific flow rate from the TS. The value currently provided in the TS is incorrect, and will continue to change over the life of the plant.

The proposed change to eliminate this parenthetical phrase will preclude the need for future TS changes to ensure that the TS contain the correct flow rate. This change does not affect the APRM rod block or trip settings, the method for calculating these settings, or the combinations of power

and flow conditions which could produce the APRM flow biased rod block and scram trips. In addition, this change does not affect the procedural requirements to calculate the actual flow rate at the beginning of each cycle.

Part E: The current method TVA utilizes to ensure compliance with the acceptance criteria of Chapter 14 of the Updated Final Safety Analysis Report (UFSAR) is to use NRC-approved methodologies to analyze the Chapter 14 events, then use the results to establish appropriate core operating limits/restrictions to ensure safe plant operation. When TVA establishes new numerical values for core operating limits/restrictions, additional TS amendments (hence, NRC approval) are necessary to incorporate the changes and make use of the values in actual plant operation.

NRC Generic Letter (GL) 88-16, "Removal of Cycle-Specific Parameter Limits From Technical Specifications," provides guidance for modifying the TS to eliminate the necessity for making core-related parameter changes each time the parameters change. Briefly summarized, the GL proposed three separate actions to modify the TS: (1) add the definition of a formal report, (2) add an administrative reporting requirement to submit the formal report to the Commission, and (3) modify individual TS to reference the defined formal report. The GL stated that the cycle-specific limits "may be modified by the licensee, without affecting nuclear safety, provided that these changes are determined using an NRC-approved methodology and consistent with all applicable limits of the plant safety analysis that are addressed in the [UFSAR]."

In References 16-18, TVA submitted TS changes to NRC to implement the guidance of GL 88-16. In Reference 19, NRC approved these changes. These changes added the definition of a formal report to the TS (GL 88-16, Action 1, above); and added the administrative reporting requirement to submit the formal report to the Commission (GL 88-16, Action 2, above).

Since these changes were approved by NRC, TVA has identified additional parameters that should be relocated to the COLR. Specifically, TVA is proposing to relocate the equations for the APRM Rod Block trip setpoint and the RBM upscale trip setpoint to the COLR. These changes satisfy GL 88-16, Action 3, above. Additionally, these changes are consistent with similar TS changes NRC has approved at other BWRs (References 20 and 21).

TVA establishes these setpoints as part of each cycle's core reload analyses, which are performed using the NRC-approved methodology in GESTAR-II (Reference 10). In accordance with the requirements of GESTAR-II, the results

of these analyses must demonstrate that applicable fuel safety limits are protected. Therefore, this satisfies the GL requirement that the equations be determined using an NRC-approved methodology and consistent with all applicable limits of the plant safety analysis that are addressed in the UFSAR.

As noted above, the remaining GL 88-16 criteria for acceptability: (1) addition of a definition of a formal report to the TS, and (2) establishment of a reporting requirement in the TS, were satisfied in References 16-19. Accordingly, this proposed change satisfies the guidance of GL 88-16.

Removal of the APRM rod block and RBM upscale trip setpoint equations from the TS has no impact upon plant operation or safety. No safety-related equipment, safety functions, or plant operations will be altered as a result of this proposed change; hence, no changes to the design bases will be made. Compliance with all applicable UFSAR Chapter 14 acceptance criteria will continue as NRC-approved methods are used to establish numerical values for the APRM rod block and RBM equations. Additionally, the TS will continue to require operation within the bounds established by these equations.

IV. NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

TVA has concluded that operation of Browns Ferry Nuclear Plant (BFN) Units 1, 2, and 3 in accordance with the proposed change to the technical specifications does not involve a significant hazards consideration. TVA's conclusion is based on its evaluation, in accordance with 10 CFR 50.91(a)(1), of the three standards set forth in 10 CFR 50.92(c).

A. The proposed amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated.

Part A: The proposed change will permit expansion of the current allowable power/flow operating region to allow operation in the extended load line limit (ELLL) region. Operation of BFN Units 1 and 3 in the ELLL region will not increase the probability of any accident previously evaluated since the Average Power Range Monitor (APRM) system and flow-biased scram setpoint are not identified as initiators of any design basis accidents or transients. Additionally, no credit is taken for the APRM flow biased scram in any accident or transient analyses. Therefore, the proposed change can not significantly increase the probability of an accident previously evaluated.

TVA's analysis of operation in the ELLL region verified that the consequences of previously evaluated accidents are within the acceptance criteria of the licensing basis. Therefore, the proposed change does not involve an increase in the consequences of an accident previously evaluated.

Part B: The proposed change does not increase challenges or create any new challenges to safety-related systems or equipment, or other equipment whose failure could cause an accident. The proposed change does not change the function of the rod block monitor (RBM) subsystem. The RBM subsystem will continue to block control rod withdrawal to ensure that fuel safety limits are protected. The revised RBM limiting conditions for operation and surveillance requirements provide increased assurance that the RBM will function to ensure that fuel safety limits are protected. Therefore, the proposed change does not involve an increase in the probability of an accident previously evaluated.

The revised RBM operability and surveillance requirements provide increased assurance that the RBM will block control rod withdrawal to ensure that fuel safety limits are protected. Accordingly, operation of BFN Units 1 and 3 with the revised RBM upscale setpoint does not involve an increase in the consequences of an accident previously evaluated.

Part C: The miscellaneous editorial changes do not affect any plant operations, equipment, or any safety-related activity. These changes increase the probability that the specifications will be correctly interpreted by adding clarifying information and/or correcting errors. Therefore, these editorial changes do not involve an increase in the probability or consequences of an accident previously evaluated.

Part D: The proposed change will delete the specific value for the rated loop recirculation flow rate found in the limiting safety system settings. This flow rate is in the TS to provide additional information, and is not a TS requirement. The proposed change does not change the limiting safety system settings or alter the method for calculating the settings. The proposed change does not affect or change operation of the plant, plant equipment, or any safety-related equipment. The proposed change does not change the APRM rod block or trip settings, the method or frequency of calibration of the APRM flow biased network, or any other operational features of the APRM system. The proposed change will only delete an incorrect flow rate from the TS. Therefore, the

proposed change does not involve an increase in the probability or consequences of an accident previously evaluated.

Part E: The proposed change will remove specific equations for the APRM rod block and RBM upscale trip setpoints from the TS and relocate them to the Core Operating Limits Report (COLR). Removing these equations from the TS does not affect or change the APRM and RBM subsystems or the functions of these systems. The proposed change does not affect or change operation of the plant, plant equipment, or any safety-related equipment. Accordingly, the proposed change does not involve an increase in the probability of an accident previously evaluated.

Removing the specific rod block equations from the TS does not change the requirements to comply with the limits of these equations during plant operations, since the TS will reference the COLR as the source of the equations. The actions to be taken in the event of noncompliance with the COLR-specified equations will also remain unchanged. Both the APRM rod block and RBM subsystems will continue to block control rod withdrawal to prevent reactor power from increasing to excess levels and to ensure that applicable limits of the plant safety analysis are met. Additionally, in accordance with the requirements of TS 6.9.1.7, these equations will continue to be developed using NRC-approved methodologies and will continue to ensure that applicable safety limits are protected. Therefore, the proposed change does not involve an increase in the consequences of an accident previously evaluated.

B. **The proposed amendment does not create the possibility of a new or different kind of accident from any accident previously evaluated.**

Part A: Operation of BFN Unit 1 and 3 in the ELLL region does not create any new failure mode or sequence of events that can lead to an accident of a different type than any previously evaluated. Operation in the ELLL region does not increase challenges or create any new challenges to safety-related systems or equipment, or other equipment whose failure could cause an accident. Changing the equation for the flow-biased APRM scram trip setpoint does not change the function of the APRM subsystem. The APRM scram trip setpoint will continue to initiate a scram to ensure that the fuel safety limit is not exceeded. Therefore, the proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

Part B: The proposed change to the RBM operability and surveillance requirements does not create any new failure mode or sequence of events that can lead to an accident of a different type than any previously evaluated. The proposed change does not increase challenges or create any new challenges to safety-related systems or equipment, or other equipment whose failure could cause an accident. The proposed change does not change the function of the RBM subsystem. The RBM subsystem will continue to block control rod withdrawal to ensure that fuel safety limits are protected. Therefore, the proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

Part C: The miscellaneous editorial changes do not affect any plant operations, equipment, or any safety-related activity. These changes increase the probability that the specifications will be correctly interpreted by adding clarifying information and/or correcting errors. Therefore, these editorial changes do not create the possibility of a new or different kind of accident from any accident previously evaluated.

Part D: The proposed change will delete the specific value for the rated loop recirculation flow rate found in a factor used to calculate limiting safety system settings for the APRM rod block and trip settings. The proposed change does not change the limiting safety system settings or alter the method for calculating the settings. The proposed change does not affect or change operation of the plant. The proposed change does not change the APRM rod block or trip settings, the method or frequency of calibration of the APRM flow biased network, or any other operational features of the APRM system. The proposed change will only delete an incorrect flow rate that is required to be calculated and maintained outside of the TS. Since there will be no change in plant operations, the proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

Part E: Removal of the APRM rod block and RBM upscale setpoint equations does not change or affect any safety-related plant equipment or its functions; or any equipment, systems, or setpoints designed to prevent or mitigate accidents. Removing these rod block equations does not create any new challenges to safety-related systems or equipment, or other equipment whose failure could cause an accident; and does not change the function and manner of operation of the APRM or RBM subsystems. The APRM and RBM

subsystems will continue to block control rod withdrawal to prevent reactor power from increasing to excess levels and to ensure that fuel safety limits are protected. Therefore, the proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

C. **The proposed amendment does not involve a significant reduction in a margin of safety.**

Part A: Operation of BFN Units 1 and 3 in the ELLL region does not affect the ability of the plant safety-related trips or equipment to perform their intended functions. Operation in the ELLL region will not cause any significant increase in offsite radiation doses resulting from any analyzed event. Although this change increases the APRM flow-biased scram equation, no credit is taken for this equation in the accident analyses. These analyses assume that transient events initiated from less than rated conditions are terminated by the fixed 120% flux scram or other safety-grade scram signals. These signals are not affected by the proposed change. Additionally, as noted above, TVA's analysis of operation in the ELLL region determined that the consequences of previously evaluated accidents remain within the acceptance criteria of the licensing basis. Therefore, this change does not involve a reduction in a margin of safety.

Part B: The proposed change does not change the function of the RBM system. The RBM system will continue to block control rod withdrawal to ensure that fuel safety limits are protected. The proposed change does not affect plant operation, design, or any safety-related activity or equipment. The proposed change does not affect or change any margin of safety. The proposed change will actually increase the margin of safety by providing more conservative operability and surveillance requirements for the RBM subsystem. Therefore, the proposed change does not involve a reduction in a margin of safety.

Part C: The miscellaneous editorial changes do not affect plant operation, design, or any safety-related activity or equipment. These changes increase the probability that the specifications will be correctly interpreted by adding clarifying information and/or correcting errors. Therefore, these changes do not involve a reduction in a margin of safety.

Part D: The proposed change will delete the specific value for the rated loop recirculation flow rate found in the limiting safety system settings. The proposed change does not change the limiting safety system settings or alter the method for calculating the settings. The proposed change does not affect or change any margin of safety. The proposed change does not alter the APRM rod block or trip settings, nor does it change the combinations of power and flow conditions which could produce the APRM flow biased rod block and scram trips. Furthermore, the value for rated loop recirculation flow rate will continue to be contained in plant procedures which are controlled by the 10 CFR 50.59 process. Therefore, the proposed change does not involve a reduction in a margin of safety.

Part E: The proposed change to remove the APRM rod block and RBM upscale setpoint equations does not change the equations or alter the method for calculating the equations. The proposed change does not change or affect any safety-related plant equipment or its functions; or any equipment, systems, or setpoints designed to prevent or mitigate accidents. Removing these rod block equations does not create any new challenges to safety-related systems or equipment, or other equipment whose failure could cause an accident; and does not change the function and manner of operation of the APRM or RBM subsystems. The requirements of TS 6.9.1.7 will continue to ensure that these equations are developed using NRC-approved methodology, and are consistent with applicable limits of the plant safety analysis. Therefore, the proposed change does not involve a reduction in a margin of safety.

V. ENVIRONMENTAL IMPACT CONSIDERATION

The proposed change does not involve a significant hazards consideration, a significant change in the types of or significant increase in the amounts of any effluents that may be released offsite, or a significant increase in individual or cumulative occupational radiation exposure. Therefore, the proposed change meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), an environmental assessment of the proposed change is not required.

VI. REFERENCES

1. Letter from TVA to NRC, dated December 23, 1993, Technical Specification (TS) Approval Schedule to Support Unit 3 Restart

2. Letter from NRC to TVA, dated December 18, 1990, Issuance of Amendment (TAC No. 76934) (TS 285) [Extended Load Line Limit Analysis - Amendment 181 to BFN Unit 2 Technical Specifications]

3. Letter from NRC to Northern States Power Company, dated November 16, 1984, Issuance of Amendment 29 to Facility Operating License No. DPR-22 for the Monticello Nuclear Generating Plant

4. Letter from NRC to Iowa Electric Light and Power Company, dated May 28, 1985, Issuance of Amendment to 120 to Facility Operating License No. DPR-49 for the Duane Arnold Energy Center

5. Letter from NRC to Iowa Electric Light and Power Company, dated August 2, 1985, Revised Safety Evaluation Supporting Amendment No. 120

6. Letter from NRC to Commonwealth Edison Company, dated January 22, 1988, Issuance of Amendment 103 to Facility Operating License No. DPR-29 (Quad Cities 1)

7. Letter from NRC to Detroit Edison Company, dated September 13, 1989, Amendment No. 42 to Facility Operating License NPF-43: (TAC Nos. 72981 and 73337) [Amendment 42 to Fermi-2 Technical Specifications]

8. Letter from NRC to Nebraska Public Power District, dated November 29, 1991, Cooper Nuclear Station - Amendment No. 151 to Facility Operating License No. DPR-46 (NRC TAC No. M81164)

9. Letter from NRC to Niagara Mohawk Power Corporation, dated November 9, 1993, Issuance of Amendment For Nine Mile Point Nuclear Station, Unit 2 (TAC No. M86639)

10. General Electric Licensing Topical Report, General Electric Standard Application for Reactor Fuel (Supplement for United States), NEDE-24011-P-A-9-US, as amended, September 1988

11. Engineering Report: Extended Load Line Limit Analysis for Browns Ferry Nuclear Plant Unit 2, Cycle 6, EAS-42-0789, General Electric Company, July 1989

12. Letter from General Electric to TVA, dated September 28, 1993, Applicability of Extended Load Line Limit Analysis Results to Browns Ferry Nuclear Plant Units 1 and 3

13. Browns Ferry Nuclear Plant, Unit 2, Cycle 6 Licensing Report, Extended Load Line Limit Analysis, TVA-BFE-052, April 1990

14. Letter from NRC to TVA, dated October 21, 1993, Issuance of Technical Specification Amendments Regarding Flow-Biased Rod Block Monitor Upscale Setpoint (TAC No. M84395) (TS 303)

15. General Electric (GE) Service Information Letter (SIL) No. 516, dated July 26, 1990, Core Flow Measurement - GE BWR/3, 4, 5, and 6 Plants

16. Letter from TVA to NRC, dated August 20, 1992, TVA BFN Technical Specification (TS) No. 309 - Removal of Cycle-Specific Core Operating Limits (Generic Letter 88-16)

17. Letter from TVA to NRC, dated April 30, 1993, Technical Specification (TS) No. 331, Supplement 1 - Miscellaneous Administrative Changes - Units 1, 2, and 3

18. Letter from TVA to NRC, dated May 17, 1993, Units 1, 2, and 3 Request for Emergency Approval of Technical Specification (TS) No. 309, Supplement 1 - Removal of Cycle-Specific Core Operating Limits (Generic Letter 88-16) and Alternative Requirements For Fuel Assemblies in the Design Features Section of Technical Specifications (Generic Letter 90-02)

19. Letter from NRC to TVA, dated May 30, 1993, Issuance of Amendments Regarding the Core Operating Limits Report (TAC Nos. M84398, M84399, and M84400) (TS 309)

20. Letter from NRC to Niagara Mohawk Power Corporation, dated June 19, 1990, Issuance of Amendment on Removal of Cycle Specific Parameters (TAC No. 75278) [Amendment 17 to License NPF-69 for Nine Mile Point Unit 2]

21. Letter from NRC to Boston Edison Company, dated January 2, 1991, Issuance of Amendment No. 133 to Facility Operating License No. DPR-35 - Pilgrim Nuclear Power Station (TAC No. 77539)