UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

February 9, 2016

Mr. Joseph W. Shea
Vice President, Nuclear Licensing
Tennessee Valley Authority
1101 Market Street, LP 3R-C
Chattanooga, TN 37402-2801

SUBJECT: BROWNS FERRY NUCLEAR PLANT, UNIT 3 – ISSUANCE OF AMENDMENT TO REVISE TECHNICAL SPECIFICATIONS RELATED TO CYCLE 18 SAFETY LIMIT MINIMUM CRITICAL POWER RATIO (CAC NO. MF5818)

Dear Mr. Shea:

The U.S. Nuclear Regulatory Commission (NRC, the Commission) has issued the enclosed Amendment No. 279 to Renewed Facility Operating License No. DPR-68 for the Browns Ferry Nuclear Plant, Unit 3. This amendment is in response to your application dated March 6, 2015, as supplemented by letter dated July 7, 2015.

This amendment revises the Technical Specification (TS) to change the Safety Limit Minimum Critical Power Ratio (SLMCPR) numeric values for Browns Ferry Nuclear Plant, Unit 3. The change decreases the numeric values of SLMCPR in TS Section 2.1.1.2 for single and two reactor recirculation loop operation based on the Cycle 18 SLMCPR evaluation.

The NRC staff has completed its review of the information provided by the licensee. The NRC staff's safety evaluation (SE) is enclosed. The NRC staff has determined that the enclosed SE (Enclosure 2) does not contain proprietary or other sensitive information pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR), Section 2.390, "Public inspections, exemptions, requests for withholding." However, the NRC will delay placing the enclosed SE in the public document room for a period of 10 working days from the date of this letter to provide Tennessee Valley Authority with the opportunity to comment on any sensitive aspects of the SE. If you believe that any information in Enclosure 2 contains sensitive information, please identify such information line-by-line and define the basis for withholding pursuant to the criteria of 10 CFR 2.390. After 10 working days, the enclosed SE will be made publicly available, unless we hear from you.

The Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

If you have any questions concerning this letter and the SE, contact me at 301-415-1447 or by E-mail at Farideh.Saba@nrc.gov.

Sincerely,

Farideh E. Saba

Farideh E. Saba, Senior Project Manager
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-296

Enclosures:
1. Amendment No. 279 to DPR-68
2. Safety Evaluation

cc w/enclosures **10 working days after issuance: Distribution via Listserv**

TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-296

BROWNS FERRY NUCLEAR PLANT, UNIT 1

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 279
Renewed License No. DPR-68

1. The Nuclear Regulatory Commission (the Commission or NRC) has found that:

   A. The application for amendment by the Tennessee Valley Authority (the licensee), dated March 6, 2015, as supplemented by letter dated July 7, 2015, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this license amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Renewed Facility Operating License No. DPR-68 is hereby amended to read as follows:

    (2) Technical Specifications

    The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 279, are hereby incorporated in this renewed license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance, and shall be implemented no later than 60 days from the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Benjamin G. Beasley

Benjamin G. Beasley, Chief
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to Renewed Facility
Operating License No. DPR-68
and Technical Specifications

Date of Issuance: February 9, 2016

ATTACHMENT TO LICENSE AMENDMENT NO. 279

RENEWED FACILITY OPERATING LICENSE NO. DPR-68

DOCKET NO. 50-296

Replace the following page of the Renewed Facility Operating License No. DPR-68 with the attached revised page. The changed area is identified by a marginal line.

REMOVE	INSERT
Page 3	Page 3

Replace the following page of Appendix A, Technical Specifications, with the attached revised page. The revised page is identified by amendment number and contains a marginal line indicating the area of change.

REMOVE	INSERT
Page 2.0-1	Page 2.0-1

(3) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use at any time any byproduct, source, and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;

(4) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use in amounts as required any byproduct, source, or special nuclear material without restriction to chemical or physical form for sample analysis or equipment and instrument calibration or associated with radioactive apparatus or components;

(5) Pursuant to the Act and 10 CFR Parts 30 and 70, to possess but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

C. This renewed operating license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter I: Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Sections 50.54 and 50.59 of Part 50, and Section 70.32 of Part 70; is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

The licensee is authorized to operate the facility at steady state reactor core power levels not in excess of 3458 megawatts thermal.

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 279, are hereby incorporated in the renewed operating license. The licensee shall operate the facility in accordance with the Technical Specifications.

For Surveillance Requirements (SRs) that are new in Amendment 212 to Facility Operating License DPR-68, the first performance is due at the end of the first surveillance interval that begins at implementation of the Amendment 212. For SRs that existed prior to Amendment 212, including SRs with modified acceptance criteria and SRs whose frequency of performance is being extended, the first performance is due at the end of the first surveillance interval that begins on the date the surveillance was last performed prior to implementation of Amendment 212.

2.0 SAFETY LIMITS (SLs)

2.1 SLs

2.1.1 Reactor Core SLs

2.1.1.1 With the reactor steam dome pressure < 585 psig or core flow < 10% rated core flow:

THERMAL POWER shall be ≤ 25% RTP.

2.1.1.2 With the reactor steam dome pressure ≥ 585 psig and core flow ≥ 10% rated core flow:

MCPR shall be ≥ 1.06 for two recirculation loop operation or ≥ 1.08 for single loop operation.

2.1.1.3 Reactor vessel water level shall be greater than the top of active irradiated fuel.

2.1.2 Reactor Coolant System Pressure SL

Reactor steam dome pressure shall be ≤ 1325 psig.

2.2 SL Violations

With any SL violation, the following actions shall be completed within 2 hours:

2.2.1 Restore compliance with all SLs; and

2.2.2 Insert all insertable control rods.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 279 TO FACILITY OPERATING LICENSE NO. DPR-68

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT, UNIT 3

DOCKET NO. 50-296

1.0 INTRODUCTION

By application dated March 6, 2015 (Reference 1), as supplemented by letter dated July 7, 2015 (Reference 2), Tennessee Valley Authority (the licensee) requested changes to the Technical Specifications (TSs) for Browns Ferry Nuclear Plant, Unit 3 (BFN Unit 3).

The proposed change would revise the TS to change the Safety Limit Minimum Critical Power Ratio (SLMCPR) numeric values for BFN Unit 3. The change decreases the numeric values of SLMCPR in TS Section 2.1.1.2 for single and two reactor recirculation loop operation based on the Cycle 18 SLMCPR evaluation.

The supplement dated July 7, 2015, provided additional information that clarified the application, did not expand the scope of the application as originally noticed, and did not change the staff's original proposed no significant hazards consideration determination as published in the *Federal Register* (FR) on July 7, 2015 (80 FR 38777).

2.0 REGULATORY EVALUATION

The following explains the use of general design criteria (GDC) for BFN Unit 3. The construction permit for BFN Unit 3 was issued by the Atomic Energy Commission (AEC) in July 1968 based on draft GDC published in July 1967 (Draft 70), and the operating license was issued in August of 1976. At the time of issuance of the operating license, the AEC had published the final rule that added Appendix A to Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, "General Design Criteria for Nuclear Power Plants," in the FR on February 20, 1971 (36 FR 3255), with the rule effective on May 21, 1971. Consequently, as discussed in the BFN Unit 3 TS Bases document, the GDC are used to evaluate the licensing basis of the plant. Therefore, the Nuclear Regulatory Commission (NRC) staff reviews amendments to the BFN Unit 3 license using the 10 CFR Part 50, Appendix A, GDC.

Compliance with the fuel licensing criteria of 10 CFR Part 50 Appendix A, GDC 10, "Reactor design," is achieved by preventing the violation of fuel design limits. GDC 10 states:

> The reactor core and associated coolant, control, and protection systems shall be designed with appropriate margin to assure that specified acceptable fuel design limits are not exceeded during any condition of normal operation, including the effects of anticipated operational occurrences.

The licensee's submittal dated March 6, 2015 states:

> The proposed change in the SLMCPR values in TS 2.1.1.2 complies with the requirements of GDC 10 and will continue to assure that fuel clad integrity is maintained. 10 CFR 50.36(c)(1), requires that safety limits (SLs) be included in the Technical Specifications. SLs for nuclear reactors are limits upon important process variables that are found to be necessary to reasonably protect the integrity of certain of the physical barriers that guard against the uncontrolled release of radioactivity. The proposed change modifies the existing SL 2.1.1.2 values.

SLs are required to be included in the TSs by 10 CFR 50.36. The SLMCPR is calculated on a cycle-specific basis because it is necessary to account for the neutronic and thermal-hydraulic response of each core design. If the cycle-specific SLMCPR is higher than the value indicated in the TSs, the licensee must update the value in the TSs.

Section 4.4.II of the Standard Review Plan (Reference 3) includes regulatory guidance for acceptable approaches to demonstrate that the above regulatory criteria are met. The NRC staff applied this guidance in its evaluation of the proposed TS change.

3.0 TECHNICAL EVALUATION

Fuel design limits can be exceeded if the fuel is producing heat equal to, or greater than, the critical power level. Normally, in a boiling-water reactor (BWR), heat being produced by the fuel causes the surrounding water to partially vaporize in a stable process called nucleate boiling. When the power level of the fuel becomes high enough for the heat to cause a transition to film boiling, the fuel is considered to have reached critical power. Film boiling is much less efficient at transferring heat away from the fuel, so localized overheating of the fuel may occur. For BWRs licensed under AREVA analysis methodologies, the critical power is predicted using fuel assembly design specific correlations—the ACE/ATRIUM 10XM correlation for ATRIUM 10XM fuel and the Siemens Power Corporation B (SPCB) Critical Power Correlation for ATRIUM-10 fuel. Due to core width and operational variations, the margin to boiling transition is described in terms of a critical power ratio (CPR), which is defined as the rod critical power as calculated by the correlation divided by the actual rod power. The more a CPR value exceeds 1.0, the greater the margin to boiling transition is. The SLMCPR is calculated using a statistical process that takes into account operating parameters and uncertainties. The Operating Limit Minimum Critical Power Ratio (OLMCPR) is equal to the SLMCPR plus a CPR margin for transients. At the OLMCPR, at least 99.9 percent of the rods avoid boiling transition during steady state operation and transients caused by a single operator error or equipment malfunction. This acceptance criterion is consistent with Section 4.4.II of the Standard Review Plan (Reference 3).

TS Section 2.1.1.2 currently reads, in part:

> MCPR [Minimum Critical Power Ratio] shall be ≥ 1.09 for two recirculation loop operation or ≥ 1.11 for single loop operation.

The proposed changed TS Section 2.1.1.2 would read, in part:

> MCPR shall be ≥ 1.06 for two recirculation loop operation or ≥ 1.08 for single loop operation.

3.1 BFN Unit 3 Cycle 18 Core

BFN Unit 3 is a BWR/4 that has two recirculation loops. The licensee proposed to change the SLMCPR values in TS 2.1.1.2 from 1.09 to 1.06 for two-recirculation-loop operation, and from 1.11 to 1.08 for single-recirculation-loop operation.

The BFN Unit 3 Cycle 18 core loading will consist of 304 ATRIUM 10XM fuel bundles and 460 ATRIUM-10 fuel bundles in the core. Both fuel design types are manufactured by AREVA, Inc. This cycle will be the first time that the ATRIUM 10XM fuel design type is loaded in BFN Unit 3. All ATRIUM-10 fuel bundles are burned fuel bundles that were initially loaded in Cycles 16 or 17.

Reference 4 documented NRC approval of the updated AREVA methodologies referenced in the license amendment request for use at BFN Units 1, 2, and 3. At that time, the NRC staff also approved a change to the SLMCPR values documented in the BFN Unit 2 TS. After the BFN Unit 3 Cycle 18 core design was developed, a cycle specific SLMCPR analysis was performed using the updated methodologies. The analysis supported SLMCPR values of 1.03 for two loop operation and 1.05 for single loop operation. Consequently, the licensee is requesting a change to the BFN Unit 3 TS to reduce the required SLMCPR to values that bound the Cycle 18 results.

3.2 Methodology

The applicant developed the BFN Unit 3 Cycle 18 SLMCPR values using the following NRC approved methodologies and uncertainties, which are identified in section 5.6.5.b of the BFN Unit 3 TS:

- ANP-10307PA "AREVA MCPR Safety Limit Methodology for Boiling Water Reactors" (Reference 5)
- ANP-10298PA "ACE/ATRIUM 10XM Critical Power Correlation" (Reference 6)
- ANP-3140(P) "Browns Ferry Units 1, 2, and 3 Improved K-factor Model for ACE/ATRIUM 10XM Critical Power Correlation" (Reference 7)
- EMF-2209(P)(A) "SPCB Critical Power Correlation" (Reference 8)

A new approved revision to ANP-10298PA (Revision 1), was published on March 31, 2014, to address deficiencies in the K-factor calculational methodology. In this license amendment request, consistent with the TS 5.6.5, the licensee references ANP-10298PA (Revision 0) for this review. Because the licensee has not adopted ANP-10298PA (Revision 1), the K-factors for BFN Unit 3 were computed using the methodology in Reference 7, which also addresses the aforementioned deficiency.

Plant-specific use of these methodologies must adhere to certain restrictions as identified during NRC review of the above topical reports.

3.2.1 Methodology Restrictions

Based on the review of the license amendment (Reference 4) that approved use of the SAFLIM3D methodology for BFN Units 1, 2, and 3, the NRC staff identified the following restrictions for the use of this methodology for SLMCPR calculations with BFN:

1. The fuel channel bow standard deviation component of the channel bow model uncertainty used by ANP-10307PA, "AREVA MCPR Safety Limit Methodology for Boiling Water Reactors, Revision 0," (i.e., TS 5.6.5.b.10) to determine the SLMCPR shall be increased by the ratio of channel fluence gradient to the nearest channel fluence gradient bound of the channel measurement database, when applied to channels with fluence gradients outside the bounds of the measurement database from which the model uncertainty is determined."

In addition, prior safety evaluations (SEs) of the topical reports describing the CPR correlations discussed the following limitations and conditions:

2. The ACE/ATRIUM 10XM methodology may only be used to perform evaluations of AREVA ATRIUM 10XM fuel design. The ACE/ATRIUM 10XM correlation may also be used to evaluate the performance of the co-resident fuel in mixed cores as discussed in Section 3.5 of the SE associated with Reference 6.

3. ACE/ATRIUM 10XM correlation shall not be used outside the range of applicability defined by the range of the test data prescribed in Table 2.1 of Reference 6.

3.2.1.1 Restriction (1)

The licensee provided the SLMCPR analysis report for the proposed BFN Unit 3 Cycle 18 core. The analysis report confirms that the calculated fast fluence gradients for the aforementioned core design were compared to the upper and lower bounds of the channel bow database. All fuel assemblies for which the fluence gradients were calculated to be outside the bounds of the measurement database, had an increased uncertainty applied as described by the restriction, in a manner consistent with what was done for Unit 2 (Reference 4).

As a result, the NRC staff concludes that the licensee has appropriately addressed this restriction imposed on application of this SLMCPR methodology at BFN Unit 3.

3.2.1.2 Restriction (2)

The BFN Unit 3 Cycle 18 core loading will consist of both ATRIUM-10 and ATRIUM 10XM fuel. The SLMCPR analysis report states that the ACE/ATRIUM 10XM correlation is only used for the ATRIUM 10XM fuel. The SPCB correlation is used for the ATRIUM-10 fuel, consistent with Reference 8, as required by TS 5.6.5.b.13.

Therefore, the NRC staff concludes that this restriction is satisfied.

3.2.1.3 Restriction (3)

Most of the parameters listed in Table 2.1 of Reference 6 relate to core characteristics that do not change as a result of differences in nuclear design, and were previously addressed for the ATRIUM-10 and ATRIUM 10XM fuel assembly designs. The parameter that does vary from core loading to core loading is the maximum local peaking factor. The licensee provided information that demonstrated that the BFN Unit 3 Cycle 18 core remains within the range of applicability provided by Table 2.1 of Reference 6.

As a result, the NRC staff concludes that the licensee has demonstrated that this restriction is satisfied.

3.3 Precedents

As a precedent, the licensee cited Reference 4, which includes a similar SLMCPR license amendment request for Unit 2 at the same site. This reference documents NRC review and approval of the use of the methodology with ATRIUM 10XM fuel for all three units at BFN, as well as cycle specific analyses performed for Unit 2 resulting in a change to the TS values. As part of the evaluation of this proposed license amendment, NRC staff evaluated the use of the updated methodology with both fuel designs planned for use in the BFN Unit 3 Cycle 18 core, ATRIUM-10 and ATRIUM 10XM. Reference 4 and its supporting references were reviewed to confirm that the precedent was applicable to BFN Unit 3 Cycle 18. Except for the specific batch sizes, uranium and gadolinia loadings in the fuel rods, cycle-specific operating histories, and unit-specific uncertainty values, the application of the methodology at both units covers a similar range of plant parameters and operating configurations. The mentioned differences would not affect the applicability of the use of this methodology with the stated fuel assembly designs, though they may affect the calculated cycle-specific SLMCPR values.

As a result of a review of the referenced SE and supporting documentation, the NRC staff has determined that the cited precedent satisfactorily demonstrates the applicability of the AREVA methodologies for analysis of the BFN Unit 3 Cycle 18 core.

3.4 Departures from NRC-Approved Methodology

No departures from NRC-approved methodologies were identified in the BFN Unit 3 Cycle 18 SLMCPR calculations.

3.5 Assembly Flow Rate Uncertainty

In the SLMCPR analysis report submitted by the licensee for BFN Unit 3 Cycle 18, the provided value for the assembly flow rate uncertainty was slightly lower than the value provided for the Unit 2 precedent and the value used in the last BFN Unit 3 SLMCPR analysis submitted for NRC approval. The licensee explained that Reference 5 requires a higher value for cores containing non-AREVA fuel. The NRC staff recognized that though the Unit 2 precedent was for a core that only had AREVA fuel, the use of the higher value will increase the SLMCPR value, and therefore, determined that this was conservative and acceptable. The BFN Unit 3 Cycle 18 evaluation used the appropriate value for cores consisting solely of AREVA fuel.

Thus, the NRC staff concludes that the use of the lower assembly flow rate uncertainty, for the reason described above, is acceptable for use in the BFN Unit 3 SLMCPR analyses.

3.6 Core Monitoring System

For BFN Unit 3 Cycle 18, the AREVA POWERPLEX core monitoring system is used as the core monitoring system. The POWERPLEX system has been in use at BFN since 2004. POWERPLEX utilizes MCPR operating limits generated by approved licensing analysis methods. POWERPLEX uses the approved methodologies in Reference 5 to determine specific MCPR for each assembly for comparison to the licensing MCPR operating limit to indirectly verify the TS SLMCPR is not violated.

Therefore, the NRC staff concludes that the AREVA POWERPLEX system can be used at BFN Unit 3, for Cycle 18, to satisfy the surveillance requirement associated with the SLMCPR.

3.7 Technical Evaluation Conclusion

The licensee's proposed BFN Unit 3 SLMCPR values are lower than the current values in the BFN Unit 3 TS, resulting in a reduction in the required margin to boiling transition. However, the licensee has demonstrated through appropriate use of NRC approved methodologies and uncertainties that the proposed BFN Unit 3 SLMCPR values will result in at least 99.9 percent of the rods avoiding boiling transition during Cycle 18 steady state operation. Therefore, the NRC staff finds that acceptance criterion 1 from Section 4.4.II of the Standard Review Plan (Reference 3) is met. The staff further finds that the licensee used methods consistent with the other regulatory requirements and guidance identified in Section 2.0 above.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Alabama State official was notified of the proposed issuance of the amendment. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding published in the FR on July 7, 2015 (80 FR 38777). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) there is reasonable assurance that such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

7.0 REFERENCES

1. Letter from J. W. Shea (Tennessee Valley Authority) to U.S. Nuclear Regulatory Commission, "Browns Ferry Nuclear Plant (BFN), Unit 3 – Application to Modify Technical Specifications 2.1.1.2, Reactor Core Minimum Critical Power Ratio Safety Limits (TS-499)," March 6, 2015. (Agencywide Documents Access and Management System (ADAMS) Accession No. ML15090A436)

2. Letter from J. W. Shea (Tennessee Valley Authority) to U.S. Nuclear Regulatory Commission, "Response to NRC Request for Additional Information Browns Ferry Nuclear Plant (BFN), Unit 3 – Application to Modify Technical Specification 2.1.1.2, Reactor Core Minimum Critical Power Ratio Safety Limits (TS-499) (TAC No. MF5818)," July 7, 2015. (ADAMS Accession No. ML15244B096)

3. NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: Light-Water Reactor (LWR) Edition," Section 4.4, Revision 2, March 2007. (ADAMS Accession No. ML070550060)

4. Letter from Farideh E. Saba (NRC) to Tennessee Valley Authority, "Browns Ferry Nuclear Plant, Units 1, 2, and 3 – Issuance of Amendments Regarding Technical Specification (TS) Change TS-478 Addition of Analytical Methodologies to TS 5.6.5 and Revision of TS 2.1.1.2 for Unit 2 (TAC Nos. MF0877, MF0878, and MF0879)," July 31, 2014. (ADAMS Accession No. ML14113A286)

5. AREVA Nuclear Power Licensing Topical Report ANP-10307NPA, Revision 0, "AREVA MCPR Safety Limit Methodology for Boiling Water Reactors," June 2011. (ADAMS Accession No. ML11259A021)

6. AREVA Nuclear Power Licensing Topical Report ANP-10298PA, Revision 0, "ACE/ATRIUM 10XM Critical Power Correlation," March 2010. (ADAMS Accession No. ML101190044)

7. AREVA Nuclear Power Licensing Topical Report ANP-3140(NP), Revision 0, "Browns Ferry Units 1, 2, and 3 Improved K-factor Model for ACE/ATRIUM 10XM Critical Power Correlation," August 2012. (ADAMS Accession No. ML13070A324)

8. AREVA Nuclear Power Licensing Topical Report EMF-2209(NP)(A), Revision 3, "SPCB Critical Power Correlation," September 2009. (ADAMS Accession No. ML093650235)

9. ANP-3248NP, Revision 1, "AREVA RAI [Request for Additional Information] Responses for Browns Ferry ATRIUM-10XM Fuel Transition - Non Proprietary," September 30, 2013. (ADAMS Accession No. ML13276A064)

Principal Contributor: Scott T. Krepel

Date: February 9, 2016

If you have any questions concerning this letter and the SE, contact me at 301-415-1447 or by E-mail at Farideh.Saba@nrc.gov.

Sincerely,

/RA/

Farideh E. Saba, Senior Project Manager
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-296

Enclosures:
3. Amendment No. 279 to DPR-68
4. Safety Evaluation

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