



Tennessee Valley Authority, 1101 Market Street, Chattanooga, Tennessee 37402

CNL-18-085

June 15, 2018

10 CFR 50.90
10 CFR 50.91
10 CFR 50 Appendix E

ATTN: Document Control Desk
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Browns Ferry Nuclear Plant, Units 1, 2, and 3
Renewed Facility Operating License Nos. DPR-33, DPR-52, and DPR-68
NRC Docket Nos. 50-259, 50-260, 50-296, and 72-052

Sequoyah Nuclear Plant, Units 1 and 2
Renewed Facility Operating License Nos. DPR-77 and DPR-79
NRC Docket Nos. 50-327, 50-328, and 72-034

Watts Bar Nuclear Plant, Units 1 and 2
Facility Operating License Nos. NPF-90 and NPF-96
NRC Docket Nos. 50-390, 50-391, and 72-1048

Subject: Tennessee Valley Authority License Amendment Request to Change the Implementation Date for License Amendments to Upgrade Emergency Action Level Scheme for Browns Ferry Nuclear Plant, Units 1, 2, and 3, Sequoyah Nuclear Plant, Units 1 and 2, and Watts Bar Nuclear Plant, Units 1 and 2

- References:
1. Letter from TVA to NRC, CNL-16-013, "Tennessee Valley Authority License Amendment Request to Adopt Emergency Action Level Schemes Pursuant to NEI 99-01, Revision 6, 'Development of Emergency Action Levels for Non Passive Reactors,'" dated January 4, 2017 (ML17004A340)
 2. Letter from NRC to TVA, "Browns Ferry Nuclear Plant, Units 1, 2, and 3; Sequoyah Nuclear Plant, Units 1 and 2; Watts Bar Nuclear Plant, Units 1 and 2 - Issuance of Amendments Regarding Request to Upgrade Emergency Action Level Scheme (CAC Nos. MF9054, MF9055, MF9056, MF9057, MF9058, MF9059, and MF9060; EPID L-2017-LLA-0160)," dated December 22, 2017 (ML17289A032)

3. Letter from NRC to TVA, "Browns Ferry Nuclear Plant, Units 1, 2, and 3; Sequoyah Nuclear Plant, Units 1 and 2; Watts Bar Nuclear Plant, Units 1 and 2 - Correction to an Omitted Reference for License Amendments Regarding Request to Upgrade Emergency Action Level Scheme (CAC Nos. MF9054, MF9055, MF9056, MF9057, MF9058, MF9059, and MF9060; EPID L-2017-LLA-0160)," dated May 29, 2018 (ML18138A452)

The purpose of this letter is to request an extension of the implementation date for the License Amendment Request (LAR) provided in Reference 1, as approved in Reference 2 and corrected in Reference 3. This request is made in accordance with 10 CFR 50.90, "Application for amendment of license, construction permit, or early site permit" and 10 CFR 50.91(a)(6), "Notice for public comment; State consultation." Specifically, Tennessee Valley Authority (TVA) is submitting a request for an amendment to change the implementation date for License Amendments to Upgrade the Emergency Action Level (EAL) Scheme for Browns Ferry Nuclear Plant (BFN), Units 1, 2, and 3, Sequoyah Nuclear Plant (SQN), Units 1 and 2, and Watts Bar Nuclear Plant (WBN), Units 1 and 2.

In Reference 1, TVA requested Nuclear Regulatory Commission (NRC) approval to revise the TVA Radiological Emergency Plan (REP) for the affected facilities by adopting the revised EAL schemes developed by the Nuclear Energy Institute (NEI), as described in NEI 99-01, Revision 6, "*Development of Emergency Action Levels for Non-Passive Reactors.*"

In Reference 2, as corrected in Reference 3, the NRC issued the following license amendments that approved TVA's request provided in Reference 1.

- Amendment Nos. 303, 327, and 287 to Renewed Facility Operating License Nos. DPR-33, DPR-52, and DPR-68 for BFN, Units 1, 2, and 3, respectively.
- Amendment Nos. 339 and 332 to Renewed Facility Operating License Nos. DPR-77 and DPR-79 for SQN, Units 1 and 2, respectively
- Amendment Nos. 118 and 18 to Facility Operating License Nos. NPF-90 and NPF-96 for WBN, Units 1 and 2, respectively.

The implementation date provided in each of the above amendments is July 3, 2018. This letter requests NRC approval to change the implementation date of the above amendments from July 3, 2018 to November 3, 2018.

The enclosure to this letter provides an evaluation of the proposed change. The proposed changes contained in this submittal have been reviewed by the Plant Operations Review Committees for each of the affected plant sites in accordance with the requirements of the TVA Quality Assurance Plan.

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TVA has determined that there are no significant hazards considerations associated with the proposed change and that the change qualifies for a categorical exclusion from environmental review pursuant to 10 CFR 51.22(c)(9). 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 and the Tennessee State Department of Environment and Conservation.

In order to maintain compliance with the current licensing bases, TVA requests an expedited review and approval of the proposed change.

There are no new regulatory commitments contained in this submittal. If you have any questions concerning this submittal, please contact Ed Schrull at (423) 751-3850.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 15th day of June 2018.

Sincerely,



E. K. Henderson
Director, Nuclear Regulatory Affairs

Enclosure:

Evaluation of the Proposed Change

cc (w/ Enclosure):

NRC Regional Administrator - Region II
NRC Senior Resident Inspector - Browns Ferry Nuclear Plant
NRC Senior Resident Inspector - Sequoyah Nuclear Plant
NRC Senior Resident Inspector - Watts Bar Nuclear Plant
NRC Project Manager - Browns Ferry Nuclear Plant
NRC Project Manager - Sequoyah Nuclear Plant
NRC Project Manager - Watts Bar Nuclear Plant
State Health Officer, Alabama State Department of Public Health
Director, Division of Radiological Health - Tennessee State Department of
Environment and Conservation

**ENCLOSURE
EVALUATION OF THE PROPOSED CHANGE**

Subject: Tennessee Valley Authority License Amendment Request to Change the Implementation Date for License Amendments to Upgrade the Emergency Action Level Scheme for Browns Ferry Nuclear Plant, Units 1, 2, and 3, Sequoyah Nuclear Plant, Units 1 and 2, and Watts Bar Nuclear Plant, Units 1 and 2

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1.0 SUMMARY DESCRIPTION

Tennessee Valley Authority (TVA) is requesting a license amendment to change the implementation date for license amendments to upgrade the Emergency Action Level (EAL) schemes for Browns Ferry Nuclear Plant (BFN), Units 1, 2, and 3, Sequoyah Nuclear Plant (SQN), Units 1 and 2, and Watts Bar Nuclear Plant (WBN), Units 1 and 2, from July 3, 2018 to November 3, 2018.

2.0 DETAILED DESCRIPTION

2.1 Background

In Reference 1, TVA requested Nuclear Regulatory Commission (NRC) approval to revise the TVA Radiological Emergency Plan (REP) for the affected facilities to adopt the revised EAL schemes developed by the Nuclear Energy Institute (NEI), as described in NEI 99-01, Revision 6, "Development of Emergency Action Levels for Non-Passive Reactors."

In Reference 2, as corrected in Reference 3, the NRC issued License Amendment Nos. 303, 327, and 287 for BFN, Units 1, 2, and 3, License Amendment Nos. 339 and 332 for SQN, Units 1 and 2, and License Amendment Nos. 118 and 18 for WBN, Units 1 and 2 that modify the Emergency Plans for BFN, Units 1, 2, and 3, SQN, Units 1 and 2; and WBN, Unit 1 and 2, to adopt the EAL schemes based on NEI 99-01, Revision 6.

The implementation date provided in each of the above amendments is July 3, 2018.

2.2 Condition Intended to Resolve

TVA has been in the process of completing the final procedure revisions to support the implementation of the above license amendments, as approved by the NRC in Reference 2 and corrected in Reference 3. The implementation of the new classification scheme involves the revision of 18 Emergency Preparedness (EP) procedures that implement risk significant planning standard functions.

On March 5, 2018, subsequent to the approval of the above amendments, TVA identified that the procedures for making Protective Action Recommendations (PARs) for the WBN Emergency Planning Zone (EPZ) omitted a sector. This condition was documented in the TVA corrective action program, and the affected procedures were promptly corrected. TVA performed a root cause analysis in order to determine the causes of this condition and to develop correct actions to prevent recurrence (CAPRs).

The root cause team identified procedure revision process issues that affect the procedure changes required to implement NEI 99-01, Revision 6.

2.3 Reason for the Change

TVA is requesting an extension of the implementation date to ensure that the new classification scheme procedures are completed in accordance with the improved procedure revision process. These actions will ensure that when implemented, the procedures impacted by the new classification scheme will be accurate. In order to maintain compliance with the current licensing bases, TVA is requesting an expedited review and approval of the proposed change.

2.4 Description of the Proposed Change

The proposed change revises the implementation date for License Amendment Nos. 303, 327, and 287 for BFN, Units 1, 2, and 3, License Amendment Nos. 339 and 332 for SQN, Units 1 and 2, and License Amendment Nos. 118 and 18 for WBN, Units 1 and 2 that modify the Emergency Plans for BFN, Units 1, 2, and 3, SQN, Units 1 and 2; and WBN, Unit 1 and 2, to adopt the EAL schemes based on NEI 99-01, Revision 6. from July 3, 2018 to November 3, 2018.

3.0 TECHNICAL EVALUATION

The proposed change involves revising the implementation date for previously approved License Amendment Nos. 303, 327, and 287 for BFN, Units 1, 2, and 3, License Amendment Nos. 339 and 332 for SQN, Units 1 and 2, and License Amendment Nos. 118 and 18 for WBN, Units 1 and 2. These amendments allow TVA to revise Emergency Plan EAL schemes to adopt the guidance provided in NEI 99-01, Revision 6, which is the most recent NRC-endorsed EAL methodology.

TVA's current Emergency Plan EAL schemes are based on the guidance established in NUMARC/NESP-007, Revision 2, "Methodology for Development of Emergency Action Levels," and continue to conform to the regulatory requirements in 10 CFR 50.47(b)(4).

3.1 Conclusion

The proposed four month extension in the implementation date for revising TVA's EAL schemes does not affect TVA's capability to meet the applicable emergency planning requirements established in 10 CFR 50.47(b)(4) and 10 CFR 50, Appendix E.

4.0 REGULATORY EVALUATION

4.1 Applicable Regulatory Requirements/Criteria

The proposed changes have been evaluated to determine whether applicable regulations and requirements continue to be met.

The regulations in 10 CFR 50.54(q) provide direction to licensees seeking to revise their Emergency Plan. The requirements related to nuclear power plant Emergency Plans are provided in 10 CFR 50.47, "Emergency plans," and the requirements of 10 CFR 50 Appendix E, "Emergency Planning and Preparedness for Production and Utilization Facilities."

10 CFR 50.47(b) establishes standards that onsite and offsite emergency response plans must meet for the NRC staff to make a positive finding that there is reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency. One of these standards, 10 CFR 50.47(b)(4), stipulates that Emergency Plans include a standard emergency classification and action level scheme.

TVA has determined that the proposed changes do not require any exemptions or relief from regulatory requirements and do not affect conformance with any 10 CFR 50, Appendix A, General Design Criteria differently than described in the affected plants' Updated Final Safety Analysis Reports (UFSARs).

4.2 No Significant Hazards Consideration

This license amendment proposes to change the implementation date for License Amendment Nos. 303, 327, and 287 for Browns Ferry Nuclear Plant (BFN), Units 1, 2, and 3, License Amendment Nos. 339 and 332 for Sequoyah Nuclear Plant (SQN), Units 1 and 2, and License Amendment Nos. 118 and 18 for Watts Bar Nuclear Plant (WBN), Units 1 and 2 from July 3, 2018 to November 3, 2018.

When implemented, the approved amendments described above, will modify the Emergency Plans for BFN, Units 1, 2, and 3, SQN, Units 1 and 2; and WBN, Unit 1 and 2, to adopt the Emergency Action Level (EAL) schemes based on Nuclear Energy Institute (NEI) 99-01, Revision 6.

The proposed change to the implementation date does not reduce the capability to meet the emergency planning requirements established in 10 CFR 50.47 and 10 CFR 50, Appendix E. The proposed change does not reduce the functionality, performance, or capability of the Tennessee Valley Authority (TVA) Emergency Response Organization (ERO) to mitigate the consequences of accidents. The TVA ERO functions will continue to be performed as required.

The proposed change has been reviewed considering the applicable requirements of 10 CFR 50.47, 10 CFR 50, Appendix E, and other applicable Nuclear Regulatory Commission (NRC) documents. TVA has evaluated whether or not a significant hazards consideration is involved with the proposed amendment by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of amendment," as discussed below:

1. Does the proposed amendment involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No.

The proposed change to the implementation date for the TVA EAL schemes to adopt the NRC-endorsed guidance in NEI 99-01, Revision 6,, "*Development of Emergency Action Levels for Non-Passive Reactors*," does not reduce the capability to meet the emergency planning requirements established in 10 CFR 50.47 and 10 CFR 50, Appendix E. The proposed change does not reduce the functionality, performance, or capability of the TVA ERO to respond in mitigating the consequences of any design basis accident.

The proposed change does not adversely affect accident initiators or precursors nor alter the design assumptions, conditions, and configuration of the facilities or the manner in which the plants are operated and maintained. The proposed change does not adversely affect the ability of structures, systems, and components (SSC) to perform their intended safety function to mitigate the consequences of an initiating event within the assumed acceptable limits. The proposed changes do not affect the source term, containment isolation, or radiological release assumptions used in evaluating the radiological consequences of any accident previously evaluated. Further, the proposed changes do not increase the types and amounts of radioactive effluent that may be released offsite, nor significantly increase individual or cumulative occupational/public radiation exposure.

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

2. Does the proposed amendment create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No.

The proposed change to the implementation date for the TVA EAL schemes to adopt the NRC-endorsed guidance in NEI 99-01, Revision 6, does not involve any physical changes to plant systems or equipment. The proposed change does not involve the addition of any new plant equipment. The proposed change will not alter the design configuration, or method of operation of plant equipment beyond its normal functional capabilities. All TVA ERO functions will continue to be performed as required. The proposed change does not create any new credible failure mechanisms, malfunctions, or accident initiators.

Therefore, the proposed change does not create the possibility of a new or different kind of accident from those that have been previously evaluated.

3. Does the proposed amendment involve a significant reduction in a margin of safety?

Response: No.

The proposed change to the implementation date for the TVA EAL schemes to adopt the NRC-endorsed guidance in NEI 99-01, Revision 6, does not alter or exceed a design basis or safety limit. There is no change being made to safety analysis assumptions, safety limits, or limiting safety system settings that would adversely affect plant safety as a result of the proposed changes. There are no changes to setpoints or environmental conditions of any structure, system, or component (SSC) or the manner in which any SSC is operated. Margins of safety are unaffected by the proposed change to the NEI 99-01, Revision 6, EAL scheme guidance implementation date. The applicable requirements of 10 CFR 50.47 and 10 CFR 50, Appendix E will continue to be met.

Therefore, the proposed changes do not involve any reduction in a margin of safety.

Based on the above, TVA concludes that the proposed amendment does not involve a significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and, accordingly, a finding of “no significant hazards consideration” is justified.

4.3 Conclusions

In conclusion, and based on the considerations discussed above: (1) there is reasonable assurance that the health and safety of the public will not be endangered by the proposed change to the implementation date to adopt the EAL schemes established in NEI 99-01, Revision 6, as endorsed by the NRC; (2) the change will be in compliance with NRC 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.

5.0 ENVIRONMENTAL CONSIDERATION

The proposed implementation date change is applicable to emergency planning requirements involving the adoption of NRC-approved EAL guidance as described in NEI-99-01, Revision 6, and does not reduce the capability to meet the emergency planning standards established in 10 CFR 50.47 and the requirements of Appendix E to 10 CFR 50. The proposed change does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluent that may be released offsite, or (iii) a significant increase in the individual or cumulative occupational radiation exposure. Accordingly, the proposed changes meet the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed change.

6.0 REFERENCES

1. Letter from TVA to NRC, "Tennessee Valley Authority License Amendment Request to Adopt Emergency Action Level Schemes Pursuant to NEI 99-01, Revision 6, 'Development of Emergency Action Levels for Non Passive Reactors,' " dated January 4, 2017 (ML17004A340)
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