



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

August 2, 2018

10 CFR 50.4
10 CFR 50.54(q)
10 CFR 50, Appendix E
10 CFR 72.44(f)

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

Subject: **Browns Ferry Nuclear Plant - Site Emergency Plan Implementing Procedure Revision**

- References:
1. **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]**
 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 - 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]**

In accordance with the requirements of Title 10 of the Code of Federal Regulations (10 CFR) 50.54(q); 10 CFR 50, Appendix E; and 10 CFR 72.44(f), the Tennessee Valley Authority (TVA) is submitting a description of changes to the Browns Ferry Nuclear Plant (BFN) Radiological Emergency Plan. The affected documents are the BFN Emergency Plan Implementing Procedures (EPIPs) named below.

| <u>EPIP</u> | <u>Revision</u> | <u>Title</u> | <u>Effective Date</u> |
|-------------|-----------------|------------------------------------|-----------------------|
| EPIP-1 | 0056 | Emergency Classification Procedure | 07/03/2018 |
| EPIP-2 | 0037 | Notification of Unusual Event | 07/03/2018 |
| EPIP-3 | 0041 | Alert | 07/03/2018 |
| EPIP-4 | 0040 | Site Area Emergency | 07/03/2018 |
| EPIP-5 | 0054 | General Emergency | 07/03/2018 |

Description of Changes and Summary of Analysis

EPIP-1, Revision 56, was revised to incorporate both editorial and non-editorial changes. The revision for EPIP-1 incorporates several modifications that included an Emergency Action Level (EAL) scheme change. EPIP-1, Revision 56, proposed rewriting the front matter to align with the TVA Fleet template, NEI 99-01, Revision 6, and NSIR/DPR-ISG-01. Several of the changes being incorporated in this revision received prior approval in Browns Ferry's transition to the Nuclear Energy Institute (NEI) 99-01, Revision 6 classification scheme and were approved by the NRC in letter ML17289A032 issued on December 22, 2017. The first paragraph in Section 1.0 was rewritten to remove the reference to the EAL Upgrade Project, add references to Initiating Condition (IC), and remove "Emergency Plan Classification Logic." The information in Section 2 defining EAL was replaced with defining information for an Initiating Condition (IC). The first entry in Section 2.5 was rewritten to replace information related to an EAL classification scheme with more generic wording that denotes a classification scheme based on ICs. The last sentence of the first paragraph of Section 3.1 was rewritten to include information related to the EALs being referred to as Fission Product Barrier thresholds. Previous EALs were replaced with the NRC-approved EALs based on the Safety Evaluation Report dated May 29, 2018 [ML18138A452]. Attachment 1 was replaced with new Attachments 1, 2, and 3, in order to implement the approved version. The definitions and acronyms in Section 5.0 were replaced by NEI 99-01, Revision 6, definitions and acronyms added in Section 6.0. Blank pages were added to allow for insertion of tabs. References and acronyms were updated throughout the procedure. References that are no longer applicable were eliminated. The information in Attachment 2 was revised to be BFN specific and to better align with the guidance provided in NEI 99-01, Revision 6, including the use of IC as opposed to EAL in some cases. Attachment 1, Emergency Classification Wall Boards, was added to EPIP-1, Revision 56. Several revisions were made to Table H1 on pages 46 and 99 of the procedure. On pages 118, 124, and 134, "Startup" was added to "Operating Mode Applicability" for IC SS5, SA5, and SU5, respectively. In addition to these changes, several editorial changes were made throughout the procedure. These were editorial in nature and did not require performance of a 50.54(q) Reduction in Effectiveness Evaluation.

EPIP-2, Revision 37, was revised to incorporate both editorial and non-editorial changes. All instances of "peer check" were replaced with "peer review." Also the phrase "Emergency Action

Level (EAL)" was replaced with "Initiating Condition (IC)" throughout the procedure when making an emergency classification declaration.

EPIP-3, Revision 41, was revised to incorporate both editorial and non-editorial changes. All instances of "peer check" were replaced with "peer review." A typographical error in the first notes box in Appendix G was corrected, as well. Lastly, the phrase "Emergency Action Level (EAL)" was replaced with "Initiating Condition (IC)" throughout the procedure when making an emergency classification declaration.

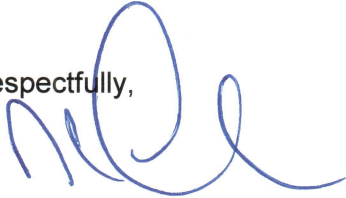
EPIP-4, Revision 40, was revised to incorporate both editorial and non-editorial changes. All instances of "peer check" were replaced with "peer review." Also the phrase "Emergency Action Level (EAL)" was replaced with "Initiating Condition (IC)" throughout the procedure when making an emergency classification declaration.

EPIP-5, Revision 54, was revised to incorporate both editorial and non-editorial changes. The phrase "Emergency Action Level (EAL)" was replaced with "Initiating Condition (IC)" throughout the procedure when making an emergency classification declaration. This revision changed the Protective Action Recommendation (PAR) flowchart to make minor editorial changes. The PAR flowchart was also revised to update the definition for Rapidly Progressing Severe Accident (RPSA) to align with the NEI 99-01 EAL scheme which was approved for implementation by the NRC on December 22, 2017 [ML17289A032]. Lastly, the revision implemented many changes to the PAR flowchart that resulted from drill and exercise lessons learned. On page 2 of the flowchart, a note was added for Protective Action Guide exceedance beyond 10 miles. The note states "If actual or projected dose at or beyond 10 miles exceed Table 1 limits, refer to CECC EPIP-1 to determine necessary PAR upgrade." This is annotated as Note 10. The note ensures that the Ingestion Exposure Pathway is appropriately considered for protective action recommendations. Reference to this note was added to the continuous assessment block since it is applicable at all times and should be considered regardless of what flow path is being evaluated. "See Note 9" (previously Note 7) was also added to the logic block for determining whether the site specific time has elapsed since the 2 mile radius evacuation commenced. The note was not previously referenced on the left side of the chart but should still be considered if there is a short term release. This revision also removed " $\geq 20\%$ clad damage (see Note 3)" and Note 3 from the PAR flowchart. This continuous assessment item would never result in a different PAR without some other change in conditions. Note 3 is only referenced in that bullet and is no longer needed if the continuous assessment bullet is deleted. The wording "hostile action event occurs" was added to address the protective actions that would be needed if a hostile action occurs while an event is already in progress. The two bullets related to the state providing information that the impediments no longer exist were combined. If impediments no longer exist, both flowpaths should be evaluated. This change eliminates the reference to whether a release is in progress. All logic blocks that state "Does the current wind direction affect new downwind sectors?" were removed and the two logic blocks that state "Has site specific time elapsed since 2 mi radius evacuation commenced?" were combined. In addition, the extra Recommendation 3 block was removed since it will no longer be needed. The notes were renumbered so that there is no confusion between the notes on the initial assessment side and those on the continuous assessment side. Lastly, Notes 4

and 5 which defined RPSA were deleted. These notes are not needed based on the wording of the RPSA logic block.

There are no new regulatory commitments in this letter. If you have any questions regarding this submittal, please contact B. F. Tidwell at (256)729-3666.

Respectfully,

A handwritten signature in blue ink, appearing to read 'DLH', with a large loop at the end.

D. L. Hughes
Vice President

cc:

NRC Regional Administrator - Region II
NRC Senior Resident Inspector - Browns Ferry Nuclear Plant
NRR Project Manager - Browns Ferry Nuclear Plant
NRC Director - Division of Spent Fuel Management, NMSS