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

CNL-19-124

January 13, 2020

10 CFR 50.90

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

Watts Bar Nuclear Plant, Unit 2
Facility Operating License No. NPF-96
NRC Docket No. 50-391

Subject: Response to Request for Additional Information to Application to Modify Watts Bar Nuclear Plant Unit 2 Technical Specifications 3.7.8 to Extend the Completion Time for an Inoperable Essential Raw Cooling Water Train on a One-Time Basis (WBN-TS-18-07) (EPID L-2019-LLA-0020)

References:

1. TVA Letter to NRC, CNL-19-014, "Application to Modify Watts Bar Nuclear Plant Unit 2 Technical Specifications 3.7.8 to Extend the Completion Time for an Inoperable Essential Raw Cooling Water Train on a One-Time Basis (WBN-TS-18-07)," dated February 7, 2019 (ML19038A483)

2. TVA Letter to NRC, CNL-19-106, "Supplement to Application to Modify Watts Bar Nuclear Plant Unit 2 Technical Specifications 3.7.8 to Extend the Completion Time for an Inoperable Essential Raw Cooling Water Train on a One-Time Basis (WBN-TS-18-07) (EPID L-2019-LLA-0020)," dated October 24, 2019 (ML19297F537)

3. TVA letter to NRC, CNL-19-113, "Supplement to Application to Modify Watts Bar Nuclear Plant Unit 2 Technical Specifications 3.7.8 to Extend the Completion Time for an Inoperable Essential Raw Cooling Water Train on a One-Time Basis (WBN-TS-18-07) (EPID L-2019-LLA-0020), dated November 7, 2019 (ML19312A111)

4. NRC Electronic Mail to TVA, "Request for Additional Information for WBN2 Request for One-Time Extension of Completion Time for TS 3.7.8 (L-2019-LLA-0020)," dated December 5, 2019 (ML19340A684)

In Reference 1, Tennessee Valley Authority (TVA) submitted a request for an amendment to the Technical Specifications (TS) for the Watts Bar Nuclear Plant (WBN) Unit 2. The proposed amendment revises the WBN Unit 2 TS 3.7.8, "Essential Raw Cooling Water (ERCW)," on a one-time basis to support performance of maintenance on 6.9 kilovolt (kV)

Shutdown Board (SDBD) 1A-A and associated 480 Volt (V) boards and motor control centers (MCC). In References 2 and 3, TVA submitted supplements to the proposed amendment request. In Reference 4, the Nuclear Regulatory Commission (NRC) provided a request for additional information (RAI) and requested that TVA respond by January 17, 2020.

Enclosure 1 to this letter provides the response to the RAI. As noted in Enclosure 1, the response to the RAI requires changes to the proposed WBN Unit 2 TS 3.7.8 and associated Bases. Accordingly, Enclosure 2 to this submittal provides a revised markup of the proposed WBN Unit 2 TS 3.7.8. Enclosure 3 to this submittal provides a revised markup of WBN Unit 2 TS Bases 3.7.8. Enclosure 4 to this submittal provides a revised (re-typed) WBN Unit 2 TS 3.7.8. The changes to the TS Bases are provided for information only. The revised WBN Unit 2 TS 3.7.8 and Bases in Enclosures 2, 3, and 4 of this submittal supersede those provided in References 1 and 2.

Enclosure 5 to this submittal provides a revised Section 2.2 to the enclosure to Reference 2, reflecting the proposed TS and Bases changes in Enclosures 2 through 4 of this submittal. Revision bars, which reflect changes to Section 2.2 to the enclosure to Reference 2, are provided in Enclosure 5 to reflect the changes in this submittal. The revised Section 2.2 in Enclosure 5 to this submittal supersedes the one provided in Reference 2.

The enclosures to this letter do not change the no significant hazard considerations nor the environmental considerations contained in Reference 1. Additionally, in accordance with 10 CFR 50.91(b)(1), TVA is sending a copy of this letter and the enclosure to the Tennessee Department of Environment and Conservation.

There are no new regulatory commitments associated with this submittal. Please address any questions regarding this request to Kimberly D. Hulvey at (423) 751-3275.

I declare under penalty of perjury that the foregoing is true and correct. Executed on this 13th day of January 2020.

Respectfully,

James T. Polickoski
Director, Nuclear Regulatory Affairs

Enclosures

cc: See Page 3

Enclosures:

1. Response to NRC Request for Additional Information WBN2 Request for One-Time Extension of Completion Time for TS 3.7.8 (L-2019-LLA-0020)
2. Revised markup of the proposed WBN Unit 2 TS 3.7.8
3. Revised markup of WBN Unit 2 TS Bases 3.7.8
4. Revised (re-typed) WBN Unit 2 TS 3.7.8
5. Revised Section 2.2 to Enclosure 1 of the License Amendment Request

cc (Enclosures):

NRC Regional Administrator - Region II
NRC Senior Resident Inspector - Watts Bar Nuclear Plant
NRC Project Manager – Watts Bar Nuclear Plant
Director, Division of Radiological Health - Tennessee State Department of Environment and Conservation

Enclosure 1

Response to NRC Request for Additional Information WBN2 Request for One-Time Extension of Completion Time for TS 3.7.8 (L-2019-LLA-0020)

NRC Introduction

By application dated February 7, 2019 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML19038A483), Tennessee Valley Authority (TVA, the licensee) requested changes to the technical specifications (TSs) for Watts Bar Nuclear Plant, Unit 2 (WBN2) to support maintenance on 6.9 kilovolt (kV) Shutdown Board (SDBD) 1A-A and associated 480 volt (V) boards and motor control centers.

The proposed changes for WBN2 would create a new CONDITION A in the TS 3.7.8, "Essential Raw Cooling Water (ERCW) System" ACTIONS table which would have a longer COMPLETION TIME compared to existing CONDITION A. The new CONDITION A would describe the situation where one ERCW train is inoperable and four NOTES above the CONDITIION would restrict the entry into the CONDITION. In the February 7, 2019, request the four NOTES above the CONDITION description would state:

1. *Only applicable during the Unit 1 spring 2020 outage (U1R16) but no later than May 1, 2020.*
2. *Only applicable when Unit 1 is defueled.*
3. *Only applicable when Ultimate Heat Sink (UHS) temperature is ≤ 71 ºF.*
4. *Only applicable during planned maintenance on 6.9 kV shutdown board 1A-A and associated 480 V boards and motor control centers.*

TVA supplemented the February 7, 2019, request with a letter dated October 24, 2019 (ADAMS Accession No. ML19297F537). Among the information and changes requested in the supplement, TVA proposed changing the first note above the CONDITION description to state:

1. *Only applicable during the Unit 1 spring 2020 outage (U1R16) but no later than May 31, 2020.*

The U.S. Nuclear Regulatory Commission (NRC) staff reviewed the TVA's request in the February 7, 2019, letter, as well as the supplement provided in the October 24, 2019, letter.

Section 3.2.2 of the February 7, 2019, letter stated:

> *Although this license amendment request is not a risk-informed submittal, the risk impacts of the proposed SDBD maintenance lineup were evaluated for WBN Unit 2 for a duration of seven days.*
>
> *The bounding estimates of the risk associated with the SDBD maintenance evolution were determined to be very small.*

Section 3.2.4 of the February 7, 2019, letter stated that a review of the past four years of plant data has shown that the ERCW temperature throughout the months of March and April does not exceed 71ºF and only exceeded 65ºF for a few days in 2017 with a maximum value of 67.3ºF and overall average of 55.5ºF. This statement appears to say that ERCW temperature going above 71 ºF during the months of March and April (i.e. during within the proposed maintenance period) is not credible.

The October 24, 2019, supplement showed ERCW temperatures exceeding 71ºF towards the middle to later periods of May in 2017 and 2018. The supplement did not contain ERCW temperature data for May 2019. Given the proposed Note allowing applicability of the proposed CONDITION through May 31, 2020, it appears ERCW temperature going above 71 ºF during the maintenance period is credible.

Section 2.2 of the LAR states that if the UHS temperature is found to be greater than 71ºF, then the analytical assumptions for justifying the extended completion time for Condition A are no longer met and Condition B is entered for an inoperable ERCW train for reasons other than Condition A. The NRC staff understands this to mean that the COMPLETION TIME for Condition B is 72 hours and would be entered when Condition A is exited for such a situation.

Based on the staff's review of the application and supplement, it appears the request is proposing TSs that would, in fact, allow continued operation for up to 10 days with one ERCW train inoperable.

Requests for Additional Information

10 CFR 50.36(b) requires TS to be derived from the analyses and evaluation included in the safety analysis report, and amendments thereto.

1. *Please provide ERCW temperature data for May 2019.*
2. *Please either confirm that the statements in Section 3.2.2 of the February 7, 2019, letter remain valid, or provide a revised statement that accounts for the October 24, 2019, supplement.*
3. *Please provide an evaluation that demonstrates the acceptability of continued operation for up to 10 days with one ERCW train inoperable. Alternatively, provide proposed TSs that will not allow continued plant operation in the proposed CONDITION A after 7 days or after one of the NOTES above the CONDITION A restricting the entry into the CONDITION are not met.*

TVA Response

1. Figure 1 provides the ERCW temperature for May 2019.
2. TVA confirms that the statements in Section 3.2.2 of TVA Letter to NRC, CNL-19-014, "Application to Modify Watts Bar Nuclear Plant Unit 2 Technical Specifications 3.7.8 to Extend the Completion Time for an Inoperable Essential Raw Cooling Water Train on a One-Time Basis (WBN-TS-18-07)," dated February 7, 2019 (ML19038A483), remain valid.
3. TVA is providing proposed TS changes that will not allow continued plant operation in the proposed WBN Unit 2 TS 3.7.8, Condition A beyond seven days. TVA understands that the primary NRC concern with the proposed change to WBN Unit 2 TS 3.7.8 was with Note 3 to proposed Condition A, which stated "Only applicable when Ultimate Heat Sink (UHS) temperature is ≤ 71ºF." The concern was that if UHS temperature exceeded 71ºF, during the planned maintenance on the 6.9 kV SDBD 1A-A and associated 480 V boards and motor control centers (MCC), then the plant would exit Condition A and enter WBN Unit 2 TS 3.7.8, Condition B (i.e., Required Action A.1 and associated Completion Time not met), which could potentially allow the inoperable ERCW train to remain inoperable for an additional 72 hours beyond the seven-day Completion Time of WBN Unit 2 TS 3.7.8, Required Action A.1.

Therefore, TVA has revised the proposed WBN Unit 2 TS 3.7.8 and associated Bases to ensure that plant operation will not be allowed to continue in the proposed Condition A for more than seven days. Specifically, TVA has removed the UHS temperature limitation from the proposed Notes for Condition A of WBN Unit 2 TS 3.7.8, and instead imposed it as part of the Completion Time for WBN Unit 2 TS 3.7.8, Required Action A.1. Additionally, if UHS temperature exceeds 71ºF while in Condition A, further operation in Condition A will be limited to 24 hours after entry into Condition A greater than or equal to (≥) 48 hours, but cannot exceed seven days. The proposed change to WBN Unit 2 TS 3.7.8, which relies on the availability of an ERCW train with only one ERCW pump under specified conditions as a compensatory measure, is similar to WBN Units 1 and 2 TS 3.8.1, Condition B for the extended allowed outage time allowed for an inoperable diesel generator that also relies on the availability of a compensatory measure. Specifically, while performing planned maintenance on the 6.9 kV SDBD 1A-A and associated 480 V boards and MCC, WBN Unit 2 TS 3.7.8, Condition A requires the inoperable ERCW train to be restored to an Operable status within seven days and the verification that UHS temperature is less than or equal to (≤) 71ºF within one hour and once every 12 hours thereafter. The allowance of seven days to restore the inoperable ERCW train to an operable status is predicated on the availability of the inoperable ERCW train to perform the safety function under specified conditions (i.e., Unit 1 defueled, during planned maintenance on 6.9 kV SDBD 1A-A (and associated 480 V boards and MCCs), and UHS temperature less than or equal to (≤) 71 ºF. These specified conditions ensure the ERCW train with one ERCW pump has sufficient heat removal capacity to mitigate a design basis event on Unit 2 and meet the additional heat removal requirements for Unit 1 in a defueled condition, as well as provide adequate cooling for the spent fuel pool.

If UHS temperature exceeds 71ºF after 48 hours of continuous ERCW train inoperability, then the specified conditions for crediting the availability of the inoperable ERCW train are no longer met and action must be taken to restore the ERCW train to an Operable status within 24 hours. Otherwise, the unit must enter WBN Unit 2 TS 3.7.8, Condition C, which requires the unit to be in Mode 3 within six hours and Mode 5 within 36 hours. If UHS temperature is discovered to be > 71ºF, prior to 48 hours of continuous operation in Condition A, then the 24 hour Completion Time to restore the inoperable ERCW train to Operable status starts after 48 hours of continuous operation in Condition A. However, the proposed change to WBN Unit 2 TS 3.7.8 does not allow continued operation in Condition A for greater than seven days.

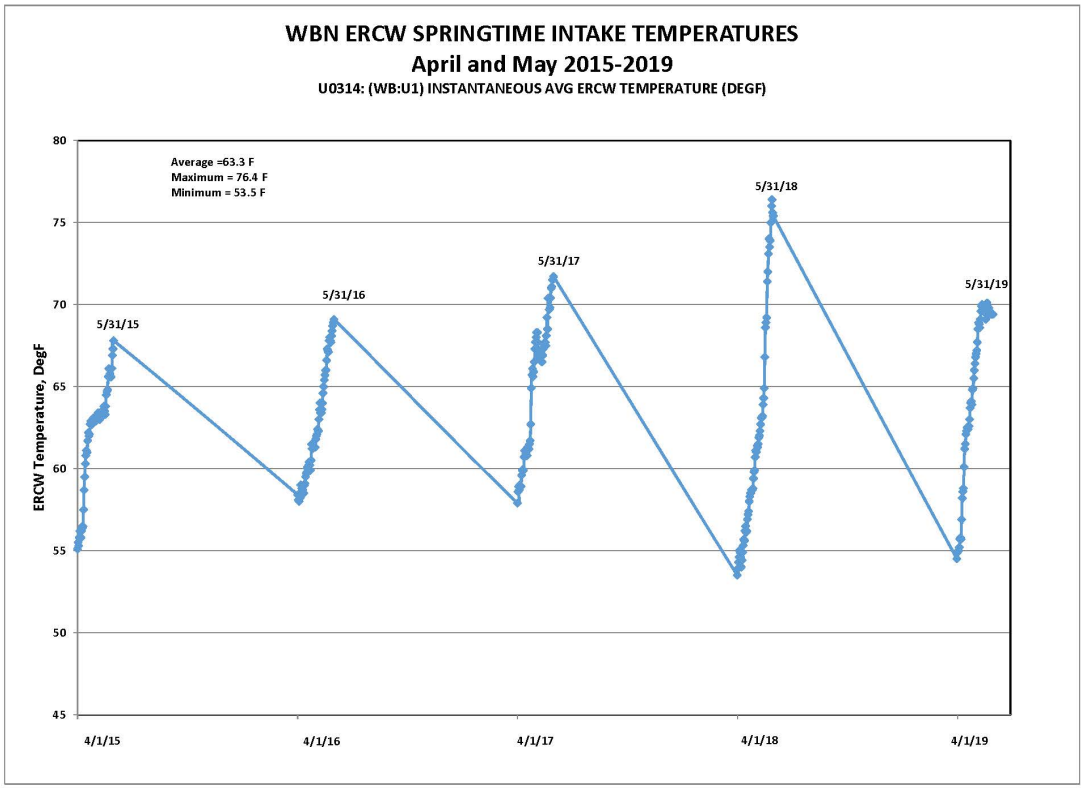
Enclosure 2 to this submittal provides a revised markup of the proposed WBN Unit 2 TS 3.7.8. Enclosure 3 to this submittal provides a revised markup of WBN Unit 2 TS Bases 3.7.8. Enclosure 4 to this submittal provides a revised (re-typed) WBN Unit 2 TS 3.7.8. The changes to the TS Bases are provided for information only. The revised WBN Unit 2 TS 3.7.8 and Bases in Enclosures 2, 3, and 4 of this submittal supersede those provided in References 1 and 2.

Enclosure 5 to this submittal provides a revised Section 2.2 of Enclosure 1 to Reference 1 and the enclosure to Reference 2, reflecting the proposed TS and Bases changes in Enclosures 2 through 4 of this submittal. Revision bars are provided in Enclosure 5 to reflect the changes. The revised Sections 2.2 in Enclosure 5 to this submittal supersedes the one provided in References 1 and 2.

References

1. TVA Letter to NRC, CNL-19-014, “Application to Modify Watts Bar Nuclear Plant Unit 2 Technical Specifications 3.7.8 to Extend the Completion Time for an Inoperable Essential Raw Cooling Water Train on a One-Time Basis (WBN-TS-18-07),” dated February 7, 2019 (ML19038A483)
2. TVA Letter to NRC, CNL-19-106, “Supplement to Application to Modify Watts Bar Nuclear Plant Unit 2 Technical Specifications 3.7.8 to Extend the Completion Time for an Inoperable Essential Raw Cooling Water Train on a One-Time Basis (WBN-TS-18-07) (EPID L-2019-LLA-0020),” dated October 24, 2019 (ML19297F537)

Figure 1 - WBN ERCW Intake Temperature History



Enclosure 2

Revised markup of the proposed WBN Unit 2 TS 3.7.8

3.7 PLANT SYSTEMS

3.7.8 Essential Raw Cooling Water (ERCW) System

LCO 3.7.8 Two ERCW trains shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
----------NOTES---------- 1. Only applicable during the Unit 1 spring 2020 outage (U1R16), but no later than May 31, 2020. 2. Only applicable when Unit 1 is defueled. 3. Only applicable during planned maintenance on 6.9 kV shutdown board 1A-A and associated 480 V boards and motor control centers. ---------- A. One ERCW train inoperable.	A.1 ----------NOTES---------- 1. Enter applicable Conditions and Required Actions of LCO 3.8.1, "AC Sources - Operating," for diesel generator made inoperable by ERCW. 2. Enter applicable Conditions and Required Actions of LCO 3.4.6, "RCS Loops - MODE 4," for residual heat removal loops made inoperable by ERCW. ---------- Restore ERCW train to OPERABLE status. AND	7 days AND 24 hours from discovery of Condition A entry ≥ 48 hours concurrent with UHS temperature > 71 ºF (continued)

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. (continued)	A.2 Verify UHS temperature is ≤ 71 °F.	1 hour AND Once every 12 hours thereafter
BA. One ERCW train inoperable for reasons other than Condition A.	BA.1 ----------NOTES---------- 1. Enter applicable Conditions and Required Actions of LCO 3.8.1, "AC Sources- Operating," for diesel generator made inoperable by ERCW. 2. Enter applicable Conditions and Required Actions of LCO 3.4.6, "RCS Loops-MODE 4," for residual heat removal loops made inoperable by ERCW. ---------- Restore ERCW train to OPERABLE status.	72 hours
CB. Required Action A.1 and associated Completion Time not met. OR Required Action and associated Completion Time of Condition AB not met.	CB.1 Be in MODE 3. AND CB.2 Be in MODE 5.	6 hours 36 hours

Enclosure 3

Revised markup of WBN Unit 2 TS Bases 3.7.8

BASES (continued)

APPLICABILITY

In MODES 1, 2, 3, and 4, the ERCW System is a normally operating system that is required to support the OPERABILITY of the equipment serviced by the ERCW System and required to be OPERABLE in these MODES.

In MODES 5 and 6, the OPERABILITY requirements of the ERCW System are determined by the systems it supports.

ACTIONS

A.1 and A.2

Condition A is modified by three notes that limit the conditions and parameters that allow entry into Condition A. The first note limits the applicability of Condition A to the time period when Unit 1 is in a refueling outage in spring 2020, but no later than May 31, 2020. The second note limits the applicability of Condition A to the time period when Unit 1 is defueled. The third note states that Condition A is only applicable during planned maintenance on 6.9 kV shutdown board 1A-A (1-BD-211-A) and associated 480 V boards and motor control centers (i.e., 1-BD-212-A1-A, 1-BD-212-A2-A, 1-MCC-213-A1-A, 1-MCC-213-A2-A, 1-MCC-214-A1-A, 1-MCC-214-A2-A,1-MCC-215-A1-A, 1-MCC-215-A2-A,and 1-MCC-232-A-A). This will allow the plant configuration to be aligned (i.e., cross-ties exist and isolation of loads to facilitate maintenance and modification activities) to minimize the heat load on the ERCW system to ensure ERCW continues to meet its design function.

The 7 day completion time is acceptable based on the following:

- Low probability of a DBA occurring during that time.
- Heat load on the ERCW System is substantially lower than assumed for the DBA with the opposite unit defueled.
- Redundant capabilities afforded by the OPERABLE train.

If one ERCW system train is inoperable for planned maintenance, action must be taken to restore the ERCW train to an OPERABLE status within 7 days. In this Condition, the remaining OPERABLE ERCW system train is adequate to perform the heat removal function. However, the overall reliability is reduced because a single failure in the OPERABLE ERCW system train could result in loss of ERCW system function.

If UHS temperature exceeds 71 ºF sometime after 48 hours of continuous ERCW train inoperability, then action must be taken to restore the ERCW train to an OPERABLE status within 24 hours. The 24 hour Completion Time allows for an exception to the normal “time zero” for beginning the allowed outage time “clock.” The 24 hour Completion Time only begins ≥ 48 hours after an ERCW train is made inoperable for planned maintenance on 6.9 kV shutdown board 1A-A (and associated 480 V boards and MCCs) and the UHS temperature is > 71 ºF.

(continued)

BASES

ACTIONS

A.1 and A.2 (continued)

Required Action A.1 is modified by two Notes. The first Note indicates that the applicable Conditions and Required Actions of LCO 3.8.1, "AC Sources - Operating," should be entered if an inoperable ERCW system train results in an inoperable diesel generator. The second Note indicates that the applicable Conditions and Required Actions of LCO 3.4.6, "RCS Loops - MODE 4," should be entered if an inoperable ERCW system train results in an inoperable residual heat removal loop. This is an exception to LCO 3.0.6 and ensures the proper actions are taken for these components.

Required Action A.2 ensures the credited UHS temperature limit is maintained. If the credited UHS temperature is not maintained, the analytical assumptions for relying on ERCW Train A as a defense-in-depth measure during the extended Completion Time for Required Action A.1 are no longer met.

B~~A~~.1

If one ERCW train is inoperable for reasons other than Condition A, action must be taken to restore OPERABLE status within 72 hours. In this Condition, the remaining OPERABLE ERCW train is adequate to perform the heat removal function. However, the overall reliability is reduced because a single failure in the OPERABLE ERCW train could result in loss of ERCW System function. Required Action B~~A~~.1 is modified by two Notes. The first Note indicates that the applicable Conditions and Required Actions of LCO 3.8.1, "AC Sources - Operating," should be entered if an inoperable ERCW train results in an inoperable diesel generator. The second Note indicates that the applicable Conditions and Required Actions of LCO 3.4.6, "RCS Loops - MODE 4," should be entered if an inoperable ERCW train results in an inoperable decay heat removal train. This is an exception to LCO 3.0.6 and ensures the proper actions are taken for these components. The 72 hour Completion Time is based on the redundant capabilities afforded by the OPERABLE train, and the low probability of a DBA occurring during this time period.

C~~B~~.1 and C~~B~~.2

If the ERCW train cannot be restored to OPERABLE status within the associated Completion Time, the plant must be placed in a MODE in which the LCO does not apply. To achieve this status, the plant must be placed in at least MODE 3 within 6 hours and in MODE 5 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

Enclosure 4

Revised (re-typed) WBN Unit 2 TS 3.7.8

3.7 PLANT SYSTEMS

3.7.8 Essential Raw Cooling Water (ERCW) System

LCO 3.7.8 Two ERCW trains shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
----------NOTES---------- 1. Only applicable during the Unit 1 spring 2020 outage (U1R16), but no later than May 31, 2020. 2. Only applicable when Unit 1 is defueled. 3. Only applicable during planned maintenance on 6.9 kV shutdown board 1A-A and associated 480 V boards and motor control centers. ---------- A. One ERCW train inoperable.	A.1 ----------NOTES---------- 1. Enter applicable Conditions and Required Actions of LCO 3.8.1, "AC Sources - Operating," for diesel generator made inoperable by ERCW. 2. Enter applicable Conditions and Required Actions of LCO 3.4.6, "RCS Loops - MODE 4," for residual heat removal loops made inoperable by ERCW. ---------- Restore ERCW train to OPERABLE status. <u>AND</u>	7 days <u>AND</u> 24 hours from discovery of Condition A entry ≥ 48 hours concurrent with UHS temperature > 71 ºF

(continued)

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. (continued)	A.2	Verify UHS temperature is ≤ 71 ºF.	1 hour AND Once every 12 hours thereafter
B. One ERCW train inoperable for reasons other than Condition A.	B.1	----------NOTES---------- 1. Enter applicable Conditions and Required Actions of LCO 3.8.1, "AC Sources- Operating," for diesel generator made inoperable by ERCW. 2. Enter applicable Conditions and Required Actions of LCO 3.4.6, "RCS Loops-MODE 4," for residual heat removal loops made inoperable by ERCW. ---------- Restore ERCW train to OPERABLE status.	72 hours
C. Required Action A.1 and associated Completion Time not met. OR Required Action and associated Completion Time of Condition B not met.	C.1 AND C.2	Be in MODE 3. Be in MODE 5.	6 hours 36 hours

Revised Section 2.2 to Enclosure 1 of the License Amendment Request

2.2 PROPOSED CHANGE

A one-time change to WBN Unit 2 TS 3.7.8 is proposed that extends the completion time for restoring an inoperable ERCW System train to operable status for planned maintenance on 6.9 kV SDBD 1A-A and associated 480 V boards and MCCs, when WBN Unit 1 is defueled and ultimate heat sink (UHS) temperature is less than or equal to (≤) 71ºF. The proposed changes are reflected in Enclosures 3 and 4 to this submittal and are summarized below:

- New TS 3.7.8 Condition A applies when one ERCW train is inoperable. The new Condition is modified by the three notes below. All three notes are required to be met in order to use new Condition A.
  1. Only applicable during the Unit 1 spring 2020 outage (U1R16), but no later than May 31, 2020.
  2. Only applicable when Unit 1 is defueled.
  3. Only applicable during planned maintenance on 6.9 kV SDBD 1A-A and associated 480 V boards and MCCs.
- Required Action A.1 for the proposed Condition A of WBN Unit 1 TS 3.7.8 specifies restoration of the affected ERCW train to operable status with a completion time of seven days. If UHS temperature exceeds 71 ºF sometime after 48 hours of continuous ERCW train inoperability, then action must be taken to restore the ERCW train to an OPERABLE status within 24 hours. The 24 hour Completion Time allows for an exception to the normal “time zero” for beginning the allowed outage time “clock.” The 24 hour Completion Time only begins ≥ 48 hours after an ERCW train is made inoperable for planned maintenance on 6.9 kV shutdown board 1A-A (and associated 480 V boards and MCCs) and the UHS temperature is > 71 ºF. Therefore, the inoperable ERCW train will not exceed seven days.

  This required action is modified by two notes that require entry into applicable Conditions and Required Actions of Limiting Condition for Operation (LCO) 3.8.1, “AC Sources - Operating,” for the inoperable emergency diesel generator (EDG) and LCO 3.4.6, “RCS Loops - MODE 4,” for Residual Heat Removal (RHR) loops made inoperable by the ERCW system condition during shutdown board maintenance. These notes are an exception to LCO 3.0.6 and ensure the proper actions are taken for the affected components in these systems.
- Required action A.2 specifies that the UHS temperature be verified to be ≤ 71ºF within one hour and once every 12 hours thereafter. If the UHS temperature is found to be greater than 71ºF, then the analytical assumptions for justifying the extended completion time for Condition A are no longer met and the Completion Time of Required Action A.1 is entered. The frequency of 12 hours is consistent with the frequency for other site shiftly surveillances and is appropriate because the temperature of the Tennessee River does not fluctuate significantly over a 12-hour period.
- Condition A (re-sequenced as Condition B) is changed to apply for reasons other than new Condition A.

- Condition B (re-sequenced as Condition C) is changed to also apply when Required Action A.1 and the associated Completion Times are not met. Therefore, when an ERCW train is inoperable for maintenance on 6.9 kV SDBD 1A-A (and associated 480 V boards and MCCs) and is not restored to an operable status in seven days, the unit is required to be placed in Mode 3 in 6 hours and Mode 5 in 36 hours.

In addition to this proposed license amendment, other TS changes will be required to facilitate electrical board maintenance through separate license amendment requests (LAR). Specifically, in Reference 1, TVA submitted an LAR to extend the completion times associated with alternating current (AC) power sources and AC electrical distribution subsystems. In Reference 2, TVA submitted an LAR to adopt Technical Specification Task Force (TSTF) Traveler TSTF-500, Revision 2, “DC Electrical Rewrite - Update to TSTF-360.” The requested changes within this LAR do not rely on the approval of the proposed changes contained in References 1 and 2.