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

CNL-17-022

February 16, 2017

10 CFR 50.90

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

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

Subject: **Application to Modify the Watts Bar Nuclear Plant Unit 2 Technical Specification 5.7.2.19 Regarding One-Time Extension of 10 CFR 50, Appendix J Type C Local Leakage Rate Tests (391-WBN-TS-17-05)**

In accordance with the provisions of Title 10 of the *Code of Federal Regulations* (10 CFR) 50.90, "Application for amendment of license, construction permit, or early site permit," Tennessee Valley Authority (TVA) is submitting for Nuclear Regulatory Commission (NRC) approval, a request for an amendment to Facility Operating License No. NPF-96 for the Watts Bar Nuclear Plant (WBN) Unit 2.

The proposed change revises Technical Specification (TS) 5.7.2.19 to extend, on a one-time basis, the Type C local leak rate test (LLRT) for certain containment isolation valves (CIVs).

WBN Unit 2 Technical Specification (TS) 5.7.2.19, "Containment Leakage Rate Testing Program," requires that the program comply with 10 CFR 50.54(o) and 10 CFR 50 Appendix J, Option B, as modified by approved exemptions. TS 5.7.2.19 also requires that this program be in accordance with the guidelines contained in Regulatory Guide (RG) 1.163, “Performance-Based Containment Leak-Test Program,” dated September 1995. RG 1.163, Section C, “Regulatory Position," endorses Nuclear Energy Institute (NEI) document NEI-94-01, Revision 0, dated July 26, 1995, "Industry Guideline for Implementing Performance-Based Option of 10 CFR 50 Appendix J." For Type C LLRTs, NEI-94-01, Section 10.2.3.1 states that these tests shall be performed at a frequency of at least once per 30 months. NEI-94-01 has no provisions that allow extensions past the 30-month baseline frequency until sufficient historical as-found test data is available to warrant extending the test interval to 60 months.

Historical data for WBN Unit 2 has not yet been achieved to warrant extending the LLRTs for the CIVs listed in Table 1 to Enclosure 1 beyond their 30-month baseline frequency. Therefore, the proposed change extends the Type C LLRT due date for the CIVs listed in Table 1 to Enclosure 1 to allow these tests to be performed during the WBN Unit 2 Cycle 1 refueling outage, which is scheduled to commence in October 2017. Specifically, the LLRTs for these CIVs will be completed prior to WBN Unit 2 entering Mode 4, following the Cycle 1 refueling outage, but no later than December 31, 2017.

Approval of this request allows TVA to continue operation of WBN Unit 2 without a mid-cycle shutdown to perform these surveillances. Furthermore, a cold shutdown (i.e., Mode 5) surveillance outage would result in an unnecessary transient to the plant. In addition, these surveillances would need to be repeated during the next refueling outage to synchronize their performance with the refueling outage schedule.

TVA initially planned to perform these surveillances during the first refueling outage for WBN Unit 2 that was scheduled to occur in September 2016. However, because of delays in the startup of WBN Unit 2, commercial operation was delayed until October 19, 2016. This delay resulted in a change to the date for the first refueling outage for WBN Unit 2 to October 2017.

Enclosure 1 provides a description of the proposed TS change, a technical evaluation of the proposed TS change, regulatory evaluation, and a discussion of environmental considerations. Attachment 1 to Enclosure 1 provides the existing TS pages marked-up to show the proposed changes. Attachment 2 to Enclosure 1 provides the existing TS pages retyped to show the proposed changes.

The WBN Plant Operations Review Committee and the TVA Nuclear Safety Review Board have reviewed this proposed change and determined that operation of WBN Unit 2 in accordance with the proposed change will not endanger the health and safety of the public.

TVA requests an expedited review of this proposed license amendment to support an approval date by May 26, 2017, which is approximately one week prior to the earliest due date listed in Table 1 of the enclosure. Approval of this proposed license amendment by the requested date precludes the risk of an additional plant shutdown solely to perform these tests.

TVA has determined that there are no significant hazards considerations associated with the proposed change and that the TS change qualifies for a categorical exclusion from environmental review pursuant to the provisions of 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 Tennessee State Department of Environment and Conservation.

Enclosure 2 lists the new regulatory commitment associated with this submittal. Please address any questions regarding this request to Edward Schrull at (423) 751-3850.

I declare under penalty of perjury that the foregoing is true and correct. Executed on this 16th day of February 2017.

Respectfully,

for

J. W. Shea
Vice President, Nuclear Licensing

Enclosures:

1. Evaluation of Proposed Technical Specification Change
2. New Regulatory Commitment

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

Evaluation of Proposed Technical Specification Change

Subject: Application to Modify the Watts Bar Nuclear Plant Unit 2 Technical Specification 5.7.2.19 Regarding One-Time Extension of 10 CFR 50, Appendix J Type C Local Leakage Rate Tests (391-WBN-TS-17-05)

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ATTACHMENTS

1. Proposed TS Changes Mark-Ups for WBN Unit 2
2. Proposed TS Changes (Final Typed) for WBN Unit 2

Enclosure 1

Evaluation of Proposed Technical Specification Change

1.0 SUMMARY DESCRIPTION

This evaluation supports a request to amend Facility Operating License No. NPF-96 for the Tennessee Valley Authority (TVA) Watts Bar Nuclear Plant (WBN), Unit 2. The proposed change revises Technical Specification (TS) 5.7.2.19, "Containment Leakage Rate Testing Program," to extend, on a one-time basis, the Type C local leak rate test (LLRT) for the containment isolation valves (CIVs) listed in Table 1 to this enclosure.

WBN Unit 2 TS 5.7.2.19 requires the program to comply with 10 CFR 50.54(o) and 10 CFR 50 Appendix J, Option B, as modified by approved exemptions. TS 5.7.2.19 also requires that this program be in accordance with the guidelines contained in Regulatory Guide (RG) 1.163, 'Performance-Based Containment Leak-Test Program,' dated September 1995.

RG 1.163, Section C, "Regulatory Position," states that Nuclear Energy Institute (NEI) document NEI-94-01, Revision 0, dated July 26, 1995, "Industry Guideline for Implementing Performance-Based Option of 10 CFR 50 Appendix J," provides methods acceptable to the NRC staff for complying with the provisions of Option B in Appendix J to 10 CFR Part 50, subject to the conditions specified in RG 1.163, Section C. NEI-94-01 provides the criteria for LLRT frequency extensions based on containment component performance. For Type B and Type C LLRTs, NEI-94-01, Sections 10.2.1.1 and 10.2.3.1 state that these tests shall be performed at a frequency of at least once per 30 months. NEI-94-01 has no provisions that allow extensions past the 30-month baseline frequency until sufficient WBN Unit 2 historical as-found test data is available to warrant extending the test interval to 60 months.

There is no WBN Unit 2 historical data to warrant extending the LLRTs for the CIVs listed in Table 1 to the enclosure beyond their 30-month baseline frequency in accordance with NEI-94-01. Therefore, the proposed change extends the LLRT due date for the CIVs listed in Table 1 to Enclosure 1 to allow these tests to be performed during the WBN Unit 2 Cycle 1 refueling outage, which is scheduled to commence in October 2017. Specifically, the LLRTs for these CIVs will be completed prior to WBN Unit 2 entering Mode 4, following the Cycle 1 refueling outage, but no later than December 31, 2017.

The LLRTs for the CIVs listed in Table 1 cannot be performed online and are normally performed during a refueling outage with the unit in the Cold Shutdown (CSD) (Mode 5), Refueling (Mode 6), or defueled condition. Approval of this request allows TVA to continue to operate WBN Unit 2 without a mid-cycle shutdown to perform these LLRTs.

2.0 DETAILED DESCRIPTION

2.1 PROPOSED CHANGES

The proposed amendment revises WBN Unit 2 TS 5.7.2.19 to add the following exception shown in bold red italics as follows:

> "Containment Leakage Rate Testing Program
>
> A program shall be established to implement the leakage rate testing of the containment as required by 10 CFR 50.54(o) and 10 CFR 50 Appendix J, Option B, as modified by approved exemptions. This program shall be in accordance with the guidelines contained in Regulatory Guide (RG) 1.163, "Performance-Based Containment Leak-Test Program," dated September 1995***, with the exception that for the containment isolation valves listed in Table 5.7.2-1, an extension of their Type C local leak rate test is permitted on a one-time basis and expires prior to WBN Unit 2 entering Mode 4, following the Cycle 1 refueling outage, but no later than December 31, 2017.***
>
> For containment leakage rate testing purposes, a value of 15.0 psig, which is equivalent to the maximum allowable internal containment pressure, is utilized for P_a to bound the peak calculated containment internal pressure for the design basis loss of coolant accident.
>
> The maximum allowable containment leakage rate, L_a, at P_a, is 0.25% of the primary containment air weight per day."

Proposed new TS Table 5.7.2-1, as shown in Attachments 1 and 2 to this enclosure, lists the CIVs for which a one-time extension of their LLRTs is requested. Table 1 to this enclosure lists the 30-month LLRT due date for each of the CIVs.

Attachment 1 to this enclosure provides the existing TS pages marked-up to show the proposed changes. Attachment 2 to the enclosure provides the existing TS pages retyped to show the proposed changes.

2.2 CONDITION INTENDED TO RESOLVE

The proposed amendment to the WBN Unit 2 Operating License (OL) permits a one-time extension of the Type C LLRTs for the CIVs listed in Table 1 to this enclosure, which are performed in Modes 5, 6, or when defueled.

The final construction activity for WBN Unit 2 was the power ascension testing. This activity included the milestones of fuel load, pre-critical tests, initial criticality, low power tests, power ascension, and declaration of commercial operations that commenced on October 19, 2016. At the beginning of 2015, WBN was nearing completion of construction and intended to transition WBN Unit 2 to full commercial operation in 2015. Accordingly, TVA completed surveillance testing to allow the mode changes to start up WBN Unit 2. Because the declaration of WBN Unit 2 commercial operations was delayed, the first refueling outage was also delayed to fully utilize the initial fuel load.

To preclude the risk of an additional plant shutdown solely to perform the LLRTs for the CIVs listed in Table 1 to this enclosure, TVA is requesting a one-time extension of the LLRTs as described in Section 2.3.

2.3 CONDITION BACKGROUND

On October 22, 2015, TVA received the NRC approved Facility OL NPF-96 for WBN Unit 2. After the WBN Unit 2 OL was received, TVA began the process of starting up the unit, which included completion of required TS equipment surveillances prior to entry into the Mode of applicability. In addition to completing the surveillance requirements (SRs) required to enter each specific mode, TVA performed power accession testing to confirm that the unit operated as designed. Initial plans for WBN Unit 2 were to obtain an OL and declare WBN Unit 2 ready for commercial operation by the end of 2015. With commercial operation originally projected in 2015, TVA planned the first refueling outage to occur in September 2016. However, because of delays in the startup of WBN Unit 2, commercial operation was delayed.

TVA initially planned to perform the WBN Unit 2 Type C LLRTs for the CIVs listed in Table 1 during the September 2016 refueling outage. When commercial operation was delayed to October 19, 2016, TVA moved the date for the first refueling outage to commence in October 2017.

To support continuous plant operation until the October 2017 refueling outage, a one-time change is requested to extend the LLRTs for the CIVs listed in Table 1. These LLRTs cannot be conducted during power operations as discussed further in Section 3.4 of this enclosure. The proposed extended date for LLRTs will allow these tests to be performed during the WBN Unit 2 Cycle 1 refueling outage, which is scheduled to commence in October 2017. Specifically, the LLRTs for these CIVs will be completed prior to WBN Unit 2 entering Mode 4, following the Cycle 1 refueling outage, but no later than December 31, 2017.

Approval of the requested LLRT extensions will prevent a plant shutdown solely to perform these tests. In addition, these tests would need to be repeated during the next refueling outage to synchronize their performance with the refueling outage schedule. Furthermore, a CSD (i.e., Mode 5) surveillance outage would cause an unnecessary transient on the plant.

Previous shutdowns of WBN Unit 2 have not resulted in the plant going into a mode of applicability whereby the LLRTs for the CIVs listed in Table 1 could be performed. TVA will, as applicable, perform the Type C LLRTs listed in Table 5.7.2-1 of this proposed amendment, prior to their extended due date, if WBN Unit 2 enters Mode 5 of sufficient duration such that the LLRTs can be performed.

3.0 TECHNICAL EVALUATION

3.1 SYSTEM DESCRIPTION

The CIVs form part of the containment pressure boundary and provide a means for fluid penetrations not serving accident consequence limiting systems to be provided with two isolation barriers that are closed on a containment isolation signal or which are normally closed. These isolation devices are either passive or active (automatic). Manual valves, de-activated automatic valves secured in their closed position (including check valves with flow through the valve secured), blind flanges, and closed systems are considered passive devices. Check valves, or other automatic valves designed to close without operator action following an accident, are considered active devices. Two barriers in series are provided for each penetration so that no single credible failure or malfunction of an active component can result in a loss of isolation or leakage that exceeds limits assumed in the safety analyses. These barriers (typically CIVs) make up the Containment Isolation System.

Automatic isolation signals are produced during accident conditions. Containment Phase "A" isolation occurs upon receipt of a safety injection signal. The Phase "A" isolation signal isolates non-essential process lines in order to minimize leakage of fission product radioactivity. Containment Phase "B" isolation occurs upon receipt of a containment pressure – High High signal and isolates the remaining process lines, except systems required for accident mitigation. In addition to the isolation signals listed above, the purge and exhaust valves receive an isolation signal on a containment high radiation condition. As a result, the CIVs (and blind flanges) help ensure that the containment atmosphere would be isolated from the environment in the event of a release of fission product radioactivity to the containment atmosphere as a result of a design basis accident (DBA).

The operability requirements for CIVs help ensure that containment is isolated within the time limits assumed in the safety analyses. Therefore, the operability requirements provide assurance that the containment function assumed in the safety analyses will be maintained.

3.2. SAFETY ANALYSIS

The DBAs that result in a significant release of radioactive material within containment are a loss of coolant accident (LOCA) and a rod ejection accident. In the analyses for each of these accidents, it is assumed that the CIVs are either closed or function to close within the required isolation time following event initiation. This action ensures that potential paths to the environment through the CIVs (including containment purge valves) are minimized.

The DBA analysis assumes that, within 60 seconds after the accident, isolation of the containment is complete and leakage terminated except for the design leakage rate and for valves in the Essential Raw Cooling Water (ERCW) system and Component Cooling System (CCS). The valves in the ERCW system and the CCS are in liquid containing systems and have been evaluated to have no impact on the DBA analysis. The containment isolation total response time of 60 seconds includes signal delay, diesel generator startup (for loss of offsite power), and CIV stroke times.

3.3 LAST PERFORMANCE OF THE LOCAL LEAK RATE TESTS

Table 1 lists the date that the LLRT was last performed for each of the CIVs for which an extension is requested. As shown in Table 1, the first LLRTs requiring exemption for WBN Unit 2 were conducted on December 3, 2014, for penetration X-58A. Therefore, the maximum extension requested for the 30-month interval from June 3, 2017 to December 31, 2017, is 211 days.

Table 1 includes the following information:

- The 30-month frequency due date
- The proposed surveillance interval extension date (i.e., no later than December 31, 2017)
- The number of days between the 30-month frequency due date and the proposed surveillance interval extension date of no later than December 31, 2017
- A description of each of the CIVs for which an exemption is requested
- The results of the last LLRT for each CIV

3.4 WHY THESE SURVEILLANCES CANNOT BE PERFORMED ONLINE

Type C LLRTs are pneumatic tests to measure CIV leakage rates. Type C tests are performed by local pressurization using the makeup flowrate methodology described in ANSI/ANS-56.8-1994, "American National Standard for Containment System Leakage Testing Requirements."

The basis for why the LLRTs for each of the CIVs listed in Table 1 cannot be performed online is as follows:

- For containment penetrations X-47A and X-47B, glycol supply and return, this requires shutting down the ice condenser glycol cooling system to allow draining and testing the penetrations. The glycol cooling supply return from the air handling units in the ice condenser is required to ensure the ice condition is maintained. Therefore, performance of this LLRT requires the plant to be in either Mode 5, Mode 6, or defueled.
- For containment penetration X-44, reactor coolant pumps (RCPs) seal water return, and containment penetration X-29, RCPs oil cooler CCS return, this requires shutting down all reactor coolant pumps to allow draining and testing the penetration. Therefore, performance of this LLRT requires the plant to be in either Mode 5, Mode 6, or defueled.
- For lower compartment ERCW penetrations X-56A, X-57A, X-58A, X-59A, X-60A, X-61A, X-62A, and X-63A, this requires isolating ERCW to the lower compartment coolers, control rod drive mechanisms (CRDM) coolers, and RCP motor coolers. Therefore, performance of this LLRT requires the plant to be in either Mode 5, Mode 6, or defueled.

3.5 TECHNICAL BASIS

The technical basis for extending the LLRTs of the CIVs contained in Table 1 is listed below:

- The CIVs have either been refurbished or replaced.
- The CIVs are similar to those in WBN Unit 1, thereby having a demonstrated operating experience (OE).
- The valves listed in Table 1 have sufficient leakage margin.
- The requested surveillance extension would avoid the performance of a mid-cycle shutdown to perform the LLRTs.

Each technical basis is discussed in further detail below.

3.5.1 The CIVs have either been Refurbished or Replaced

The CIVs listed in Table 1 were either replaced or refurbished in support of WBN Unit 2 becoming operational. This further ensures the reliability of the CIVs during the extended period for which an exemption is requested.

3.5.2 Similarity of the CIVs to those in WBN Unit 1 and Review of OE

The WBN Unit 2 CIVs shown in Table 1, for which an exemption is requested, are the same design as those in WBN Unit 1. From a comparison stand point, the WBN Unit 2 valves operate under the same service conditions in the ice condenser Glycol Cooling System, the Chemical and Volume Control System (CVCS), the CCS, and the ERCW System as those in WBN Unit 1. Therefore, the seat leakage for the WBN Unit 2 CIVs is not expected to be significantly different from those in WBN Unit 1.

The valves listed in Table 1 consist of both flow control valves (FCVs) and check valves (CKVs). TVA performed an operating experience review of the similar valves in WBN Unit 1. Since initial WBN Unit 1 startup, there have been no failures of the minimum path leakage associated with the penetrations listed in Table 1.

The corresponding WBN Unit 1 FCVs and CKVs have operated successfully since initial WBN Unit 1 startup except as discussed below:

- During the U1R4 operating cycle in 2002, 1-FCV-67-103 failed, was refurbished, and passed the as-left LLRT. This valve successfully passed all subsequent LLRTs.
- Valve 1-CKV-61-533 experienced failures during the U1R1, U1R2, and U1R6 operating cycles. The U1R1 and U1R2 failures were caused by accumulation of particles on the valve seats. This valve was originally the low point of the penetration. During U1R2, the valve was relocated to a higher point parallel to the main glycol line to prevent gravity accumulation of particles on the valve seat. This modification was proven successful based on operating experience from the Sequoyah Nuclear Plant (SQN) Units 1 and 2, and subsequent WBN Unit 1 outages. A similar modification has been implemented in WBN Unit 2. The U1R6 cause failure was also attributed to accumulation of particles on the valve seat. This failure is considered an isolated case based on historical information of CIVs of the same design in the glycol system. Since the U1R6 failure for 1-CKV-61-533, four successful LLRTs have been performed during the U1R7, U1R8, U1R9, and U1R11. Since the U1R6 failure for 1-CKV-61-533, four successful LLRTs have been performed during the U1R7, U1R8, U1R9, and U1R11 operating cycles. The test frequency for 1-CKV-61-533 was extended following U1R9 due to good

performance in accordance with the containment leak rate test program. The next LLRT of 1-CKV-61-533 is scheduled to be performed during the U1R14 outage scheduled for Spring 2017.

- Valve 1-CKV-67-1054D experienced failures during the U1R7, U1R10, and U1R13 operating cycles due to an accumulation of silt from the ERCW system. However, this valve has successfully passed the allowable leakage criteria for all other LLRTs. Additionally, the other seven CKVs in System 67 (i.e., ERCW) have been tested multiple times since U1R7 with no detectable seat leakage.

Based on the comparison of the WBN Unit 2 valves listed in Table 1 to the comparable valves for WBN Unit 1 and the above operating experience from WBN Unit 1, TVA expects that the CIVs listed in Table 1 will continue to function properly during the extended period for which an exemption is requested.

3.5.3 The Valves Listed in Table 1 have Sufficient Leakage Margin

The valves for which the extension of the LLRT interval is being requested are leak-tight and in good condition. Table 1 lists the leakage observed during the last LLRT for each of the CIVs for which an exemption is requested. The total leakage of these CIVs [i.e., 0.24 standard cubic feet per hour (scfh)] is approximately 0.16 percent (%) of the total allowable leakage for the WBN Unit 2 Type B and C tests (i.e., 147.6 scfh, which is the TS 60% La limit). For comparison purposes, the WBN Unit 2 total leak rate for all penetrations on a minimum path basis is approximately 4.5% of the total allowable leakage (i.e., 6.64 scfh/147.6 scfh).

The total leakage of the CIVs in Table 1 is also approximately 0.39% of the total allowable bypass leakage for the WBN Unit 2 Type B and C bypass tests (61.5 scfh, which is the TS 25% La limit). For comparison purposes, the WBN Unit 2 total leakage for all bypass leakage penetrations on a minimum path basis is approximately 4.4% of the total allowable bypass leakage (i.e., 2.68 scfh/61.5 scfh). The leak-tight condition of these components has been verified by Type C LLRTs. Therefore, the remaining margin is sufficient to ensure any incremental increase in leakage resulting from the extension would not cause unacceptable as-found test results during the U2R1 outage.

The longest proposed extension period listed in Table 1 is approximately five months which represents approximately 17% of the 30-month baseline frequency for 10 CFR 50 Appendix J, Option B in accordance with the guidance in NEI-94-01. Furthermore, the guidance in NEI-94-01 allows the LLRT frequency to be extended to 60 months based on containment component performance. Therefore, any incremental increase in leakage that may result from the requested extension period would not significantly contribute to the total leakage limit.

3.5.4 The Requested Surveillance Extension Would Avoid the Performance of a Mid-Cycle Shutdown to Perform the LLRTs

Approval of the requested surveillance interval extensions will prevent a plant shutdown solely to perform these surveillance tests. A cold shutdown (i.e., Mode 5) surveillance outage would result in an unnecessary transient to the plant. In addition, these surveillances would need to be repeated during the next refueling outage to synchronize their performance with the refueling outage schedule. The requested exemption would also reduce both the personnel radiological exposure and the expenditure of resources that

would be required to comply with the regulation, without any significant increase in risk to the public health and safety.

4.0 REGULATORY EVALUATION

4.1 APPLICABLE REGULATORY REQUIREMENTS/CRITERIA

4.1.1 Regulations

10 CFR 50.36 sets forth the regulatory requirements for the content of the TSs. This regulation requires, in part, that the TS contain SRs. 10 CFR 50.36(c)(3), states that SRs to be included in the TS are those relating to test, calibration, or inspection which assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the TS LCO will be met.

4.1.2 General Design Criteria

As noted in the WBN dual-unit updated final safety analysis report (UFSAR) Section 3.1.1, WBN was designed to meet the intent of the "Proposed General Design Criteria for Nuclear Power Plant Construction Permits" published in July 1967. The WBN construction permit was issued in January 1973. The WBN Unit 2 UFSAR, however, addresses the NRC General Design Criteria (GDC) published as Appendix A to 10 CFR 50 in July 1971, including Criterion 4 as amended October 27, 1987.

The WBN UFSAR contains these GDC followed by a discussion of the design features and procedures that meet the intent of the criteria. The relevant GDC are described below.

Criterion 16 - Containment Design

Reactor containment and associated systems shall be provided to establish an essentially leaktight barrier against the uncontrolled release of radioactivity to the environment and to assure that the containment design conditions important to safety are not exceeded for as long as postulated accident conditions require.

Conformance with GDC 16 is described in Section 3.1.2.2 of the WBN dual-unit UFSAR.

Criterion 50 - Containment Design Basis

The reactor containment structure, including access openings, penetrations, and the containment heat removal system shall be designed so that the containment structure and its internal compartments can accommodate, without exceeding the design leakage rate and, with sufficient margin, the calculated pressure and temperature conditions resulting from any LOCA.

This margin shall reflect consideration of (1) the effects of potential energy sources which have not been included in the determination of the peak conditions, such as energy in steam generators and energy from metal-water and other chemical reactions that may result from degraded emergency core cooling functioning, (2) the limited experience and experimental data available for defining accident phenomena and containment responses, and (3) the conservatism of the calculational model and input parameters.

Conformance with GDC 50 is described in Section 3.1.2.5 of the WBN dual-unit UFSAR.

Criterion 52 - Capability for Containment Leakage Rate Testing

The reactor containment and other equipment which may be subjected to containment test conditions shall be designed so that periodic integrated leakage rate testing can be conducted at containment design pressure.

Conformance with GDC 50 is described in Section 3.1.2.5 of the WBN dual-unit UFSAR. Details concerning the conduct of periodic integrated leakage rate tests are in Section 6.2 of the WBN dual-unit UFSAR.

Criterion 55 - Reactor Coolant Pressure Boundary Penetrating Containment

Each line that is part of the reactor coolant pressure boundary and that penetrates primary reactor containment shall be provided with containment isolation valves as follows, unless it can be demonstrated that the containment isolation provisions for a specific class of lines, such as instrument lines, are acceptable on some other defined basis:

1. One locked closed isolation valve inside and one locked closed isolation valve outside containment; or
2. One automatic isolation valve inside and one locked closed isolation valve outside containment; or
3. One locked closed isolation valve inside and one automatic isolation valve outside containment. A simple check valve may not be used as the automatic isolation valve outside containment; or
4. One automatic isolation valve inside and one automatic isolation valve outside containment. A simple check valve may not be used as the automatic isolation valve outside containment.

Isolation valves outside containment shall be located as close to containment as practical, and automatic isolation valves shall be designed to take the position that provides greater safety upon loss of actuating power.

Other appropriate requirements to minimize the probability or consequences of an accidental rupture of these lines or of lines connected to them shall be provided as necessary to assure adequate safety. Determination of the appropriateness of these requirements, such as higher quality in design, fabrication, and testing, additional provisions for inservice inspection, protection against more severe natural phenomena, and additional isolation valves and containment, shall include consideration of the population density, use characteristics, and physical characteristics of the site environs.

Conformance with GDC 55 is described in Section 3.1.2.5 of the WBN dual-unit UFSAR.

Criterion 56 - Primary Containment Isolation

Each line that connects directly to the containment atmosphere and penetrates primary reactor containment shall be provided with containment isolation valves as follows, unless it can be demonstrated that the containment isolation provisions for a specific class of lines, such as instrument lines, are acceptable on some other defined basis:

1. One locked closed isolation valve inside and one locked closed isolation valve outside containment; or
2. One automatic isolation valve inside and one locked closed isolation valve outside containment; or
3. One locked closed isolation valve inside and one automatic isolation valve outside containment. A simple check valve may not be used as the automatic isolation valve outside containment; or
4. One automatic isolation valve inside and one automatic isolation valve outside containment. A simple check valve may not be used as the automatic isolation valve outside containment.

Isolation valves outside containment shall be located as close to containment as practical, and automatic isolation valves shall be designed to take the position that provides greater safety upon loss of actuating power.

Conformance with GDC 56 is described in Section 3.1.2.5 of the WBN dual-unit UFSAR. Additional details can be found in Section 6.2 of the WBN dual-unit UFSAR.

There will be no changes to the WBN design such that compliance with any of the regulatory requirements above would come into question. As such, WBN Unit 2 will continue to comply with the applicable regulatory requirements.

4.2 PRECEDENTS

The following precedents are related to the proposed TS change in this submittal:

- NRC letter to Northern States Power Company - Minnesota, “Prairie Island Nuclear Generating Plant, Unit 2 - Issuance of Amendment Re: Exception to Technical Specification 5.5.14 Testing Requirements Associated with Steam Generator Replacement (TAC No. ME9141),” dated September 11, 2013 (ML13175A208). This License Amendment provided a one-time exception from the requirement to perform an Appendix J, Type A. containment integrated leakage rate test, following modifications to the containment pressure boundary resulting from the replacement of the steam generators.
- NRC letter to FirstEnergy Nuclear Operating Company, “Beaver Valley Power Station, Unit Nos. 1 and 2 - Issuance of Amendment Re: One-Time Deferral of Containment Integrated Leak Rate Test (TAC Nos. MB6660 and MB6661),” dated March 5, 2003 (ML030640880). This License Amendment allowed a one-time five-year extension to the current 10-year test interval for the containment integrated leak rate test (ILRT).

- NRC letter to McGuire Nuclear Station, "McGuire Nuclear Station, Units 1 and 2 - Issuance of Amendments Regarding One-Time Extension of Appendix J Type A Integrated Leakage Rate Test Interval (CAC Nos. MF7407 and MF7408)," dated September 26, 2016 (ML16236A053). This License Amendment allowed a one-time extension to the 10-year frequency of the containment leakage rate test. The change extended the period from 10 years to 10.5 years between successive tests.

Also, while not an exemption request, the proposed TS change is similar in nature to the following exemption requests approved by the NRC to allow an extension to the schedular requirements in 10 CFR 50, Appendix J:

- NRC letter to TVA, "Exemption To Appendix J of 10 CFR Part 50, Schedular Requirements for Type B and C Local Leak Rate Tests Sequoyah Nuclear Plant Unit 1 (TAC No. M90876)," dated December 8, 1994 (ML013310371)
- NRC letter to Power Authority of the State of New York, "Issuance of Amendment for Indian Point Nuclear Generating Unit No. 3 (TAC No. M96757)," dated January 28, 1997 (ML003780548)

4.3 SIGNIFICANT HAZARDS CONSIDERATION

The Tennessee Valley Authority (TVA) is proposing an amendment to revise the Watts Bar Nuclear Plant (WBN) Unit 2 Technical Specifications (TSs) to revise TS 5.7.2.19 to allow a one-time exception to Regulatory Guide (RG) 1.163, “Performance-Based Containment Leak-Test Program.” The proposed amendment extends, on a one-time basis, the Type C local leak rate tests (LLRTs) for 34 containment isolation valves (CIVs), which are normally performed during a refueling outage with the unit in cold shutdown (CSD), refueling mode, or defueled.

WBN Unit 2 TS 5.7.2.19, requires that the program comply with 10 CFR 50.54(o) and 10 CFR 50 Appendix J, Option B, as modified by approved exemptions. TS 5.7.2.19 also requires that this program be in accordance with the guidelines contained in RG 1.163.

RG 1.163, Section C, “Regulatory Position," states that Nuclear Energy Institute (NEI) document NEI-94-01, Revision 0, dated July 26, 1995, "Industry Guideline for Implementing Performance-Based Option of 10 CFR 50 Appendix J," provides methods acceptable to the NRC staff for complying with the provisions of Option B in Appendix J to 10 CFR Part 50, subject to the conditions specified in RG 1.163, Section C. NEI-94-01 provides the criteria for LLRT frequency extensions based on containment component performance. For Type B and Type C LLRTs, NEI-94-01, Sections 10.2.1.1 and 10.2.3.1 state that these tests shall be performed at a frequency of at least once per 30 months. NEI-94-01 has no provisions that allow extensions past the 30-month baseline frequency until sufficient WBN Unit 2 historical as-found test data is available to warrant extending the test interval to 60 months.

There is no WBN Unit 2 historical data to warrant extending the LLRTs for the CIVs beyond their 30-month baseline frequency in accordance with NEI-94-01. Therefore, the proposed change extends the LLRT due dates for the CIVs from their current due dates to allow these tests to be performed during the WBN Unit 2 Cycle 1 refueling outage, which is scheduled to commence in October 2017. Specifically, the LLRTs for these CIVs will be completed prior to WBN Unit 2 entering Mode 4, following the Cycle 1 refueling outage, but no later than December 31, 2017.

Approval of the request allows TVA to operate the unit without a mid-cycle shutdown to perform these surveillances. TVA is requesting this extension to mitigate the risk of an additional plant shutdown solely to perform the LLRTs.

TVA has evaluated whether or not a significant hazards consideration is involved with the proposed amendment(s) 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 amendment is a change to TS 5.7.2.19 to allow a one-time exception to RG 1.163 to extend the Type C LLRTs for a limited number of CIVs. The valves for which the extension of the LLRT interval is being requested are leak-tight and in good condition. The total leakage of these valves [i.e., 0.24 standard cubic feet per hour (scfh)] is approximately 0.16 percent (%) of the total allowable leakage (La) for the

WBN Unit 2 Type B and C tests (i.e., 147.6 scfh, which is the TS 60% La limit). For comparison purposes, the WBN Unit 2 total leak rate for all penetrations on a minimum path basis is approximately 4.5% of the total allowable leakage (i.e., 6.64 scfh/147.6 scfh).

The total leakage of the CIVs for which an extension is requested is also approximately 0.39% of the total allowable bypass leakage for the WBN Unit 2 Type B and C bypass tests (61.5 scfh, which is the TS 25% La limit). For comparison purposes, the WBN Unit 2 total leakage for all bypass leakage penetrations on a minimum path basis is approximately 4.4% of the total allowable bypass leakage (i.e., 2.68 scfh/61.5 scfh). The leak-tight condition of these components has been verified by Type C LLRTs. Therefore, the remaining margin is sufficient to ensure any incremental increase in leakage resulting from the extension would not cause unacceptable as-found test results during the WBN U2R1 outage. Therefore, the proposed delay in performance of the LLRTs in this amendment request does not increase the probability of an accident previously evaluated.

A delay in performing these LLRTs does not result in a system being unable to perform its required function. In the case of this one-time extension request, the short period of additional time that the affected systems and components will be in service before the next performance of the LLRT will not affect the ability of those systems to operate as designed. Therefore, the systems required to mitigate accidents will remain capable of performing their required function. No new failure modes have been introduced because of this action and the consequences remain consistent with previously evaluated accidents. On this basis, the proposed delay in performance of the LLRTs in this amendment request does not involve a significant increase in the consequences of an accident.

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 amendment does not involve a physical alteration of any system, structure, or component (SSC) or a change in the way any SSC is operated. The proposed amendment does not involve operation of any SSCs in a manner or configuration different from those previously recognized or evaluated. No new failure mechanisms will be introduced by the one-time LLRT extensions being requested.

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

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

   Response: No.

   The proposed amendment is a change to TS 5.7.2.19 to allow a one-time exception to RG 1.163 to extend the Type C LLRTs for a limited number of CIVs. The WBN Unit 2 CIVs, for which an extension is requested, are the same design as those in WBN Unit 1 and operate under the same service conditions. Furthermore, any increase in leakage because of the extension is expected to be within TS limits and will not compromise containment integrity. Extending these LLRTs does not involve a modification of any TS limiting condition for operation. Extending these LLRTs does not involve a change to any limit on accident consequences specified in the license or regulations. Extending these LLRTs does not involve a change in how accidents are mitigated or a significant increase in the consequences of an accident. Extending these LLRTs does not involve a change in a methodology used to evaluate consequences of an accident. Extending these LLRTs does not involve a change in any operating procedure or process.

   Based on the limited additional period of time that the systems and components will be in service before the LLRTs are next performed, as well as the operating experience that demonstrates the reliability of the CIVs, it is reasonable to conclude that the margins of safety associated with the LLRTs for these CIVs will not be affected by the requested extension.

   Therefore, the proposed change does not involve a significant 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.

4.4 CONCLUSIONS

In conclusion, based on the considerations discussed above, (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) 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.

5.0 ENVIRONMENTAL CONSIDERATION

A review has determined that the proposed amendment would change a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or would change an inspection or SR. However, the proposed amendment does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluents that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed amendment meets 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 amendment.

Table-1 **Penetrations which Require a Test Interval Extension**						
Date Last Performed	30 month Frequency Due Date	Maximum Extended Date	Extension (Days)	Containment Penetration/ Description/CIV	Valve Type	Last LLRT (scfh)
04/20/15	10/20/17	12/31/17	72	X-29/RCP oil cooler CCS Return Outboard/FCV-70-92	Butterfly Valve	0.00
02/25/15	08/25/17	12/31/17	128	X-44/RCP Seal Water Return Outboard/FCV-62-63	Motor Operated Gate Valves	0.00
12/31/14	06/30/17	12/31/17	184	X-47A/Glycol Supply Inboard/FCV-61-192	Air Operated Diaphragm Valves	0.00
12/31/14	06/30/17	12/31/17	184	X-47A/Glycol Supply Inboard/CKV-61-533	Check Valve	0.00
12/31/14	06/30/17	12/31/17	184	X-47A/Glycol Supply Outboard/ FCV-61-191	Air Operated Diaphragm Valves	0.00
12/31/14	06/30/17	12/31/17	184	X-47B/Glycol Return Inboard/FCV-61-194	Air Operated Diaphragm Valves	0.00
12/31/14	06/30/17	12/31/17	184	X-47B/Glycol Return Inboard/CKV-61-680	Check Valve	0.00
12/31/14	06/30/17	12/31/17	184	X-47B/Glycol Return Outboard/ FCV-61-193	Air Operated Diaphragm Valves	0.00
12/4/14	06/4/17	12/31/17	210	X-56A/Lower Containment ERCW Supply/ FCV-67-113	Butterfly Valve	0.00
12/4/14	06/4/17	12/31/17	210	X-56A/Lower Containment ERCW Supply/ CKV-67-1054D	Check Valve	0.00
12/4/14	06/4/17	12/31/17	210	X-56A/Lower Containment ERCW Supply/FCV-67-107	Butterfly Valve	0.00
12/4/14	06/4/17	12/31/17	210	X-57A/Lower Containment ERCW Return/FCV-67-111	Butterfly Valve	0.01

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Evaluation of Proposed Technical Specification Change

Table-1 Penetrations which Require a Test Interval Extension						
Date Last Performed	30 month Frequency Due Date	Maximum Extended Date	Extension (Days)	Containment Penetration/ Description/CIV	Valve Type	Last LLRT (scfh)
12/4/14	06/4/17	12/31/17	210	X-57A/Lower Containment ERCW Return/CKV-67-575D	Check Valve	0.01
12/4/14	06/4/17	12/31/17	210	X-57A/Lower Containment ERCW Return/FCV-67-112	Butterfly Valve	0.01
12/3/14	06/3/17	12/31/17	211	X-58A/Lower Containment ERCW Supply/FCV-67-89	Butterfly Valve	0.00
12/3/14	06/3/17	12/31/17	211	X-58A/Lower Containment ERCW Supply/CKV-67-1054A	Check Valve	0.00
12/3/14	06/3/17	12/31/17	211	X-58A/Lower Containment ERCW Supply/FCV-67-83	Butterfly Valve	0.04
12/10/14	06/10/17	12/31/17	204	X-59A/Lower Containment ERCW Return/FCV-67-87	Butterfly Valve	0.00
12/10/14	06/10/17	12/31/17	204	X-59A/Lower Containment ERCW Return/CKV-67-575A	Check Valve	0.00
12/4/14	06/4/17	12/31/17	210	X-59A/Lower Containment ERCW Return/FCV-67-88	Butterfly Valve	0.09
12/5/14	06/5/17	12/31/17	209	X-60A/Lower Containment ERCW Supply/FCV-67-105	Butterfly Valve	0.01
12/5/14	06/5/17	12/31/17	209	X-60A/Lower Containment ERCW Supply/CKV-67-1054B	Check Valve	0.01
12/5/14	06/5/17	12/31/17	209	X-60A/Lower Containment ERCW Supply/FCV-67-99	Butterfly Valve	0.02
12/5/14	06/5/17	12/31/17	209	X-61A/Lower Containment ERCW Return/FCV-67-103	Butterfly Valve	0.00
12/5/14	06/5/17	12/31/17	209	X-61A/Lower Containment ERCW Return/CKV-67-575B	Check Valve	0.00
12/5/14	06/5/17	12/31/17	209	X-61A/Lower Containment ERCW Return/FCV-67-104	Butterfly Valve	0.04
12/11/14	06/11/17	12/31/17	203	X-62A/Lower Containment ERCW Supply/FCV-67-97	Butterfly Valve	0.00

Table-1 **Penetrations which Require a Test Interval Extension**						
Date Last Performed	30 month Frequency Due Date	Maximum Extended Date	Extension (Days)	Containment Penetration/ Description/CIV	Valve Type	Last LLRT (scfh)
12/11/14	06/11/17	12/31/17	203	X-62A/Lower Containment ERCW Supply/ CKV-67-1054C	Check Valve	0.00
12/11/14	06/11/17	12/31/17	203	X-62A/Lower Containment ERCW Supply/FCV-67-91	Butterfly Valve	0.00
1/21/15	07/21/17	12/31/17	163	X-63A/Lower Containment ERCW Return/FCV-67-95	Butterfly Valve	0.00
1/21/15	07/21/17	12/31/17	163	X-63A/Lower Containment ERCW Return/CKV-67-575C	Check Valve	0.00
1/21/15	07/21/17	12/31/17	163	X-63A/Lower Containment ERCW Return/FCV-67-96	Butterfly Valve	0.00
					Total	0.24

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Evaluation of Proposed Technical Specification Change

Attachment 1

Proposed TS Changes (Mark-Ups) for WBN Unit 2

5.7.2.18 Safety Function Determination Program (SFDP) (continued)

A loss of safety function exists when, assuming no concurrent single failure, a safety function assumed in the accident analysis cannot be performed. For the purpose of this program, a loss of safety function may exist when a support system is inoperable, and:

a. A required system redundant to the system(s) supported by the inoperable support system is also inoperable; or

b. A required system redundant to the system(s) in turn supported by the inoperable supported system is also inoperable; or

c. A required system redundant to the support system(s) for the supported systems (a) and (b) above is also inoperable.

The SFDP identifies where a loss of safety function exists. If a loss of safety function is determined to exist by this program, the appropriate Conditions and Required Actions of the LCO in which the loss of safety function exists are required to be entered.

5.7.2.19 Containment Leakage Rate Testing Program

A program shall be established to implement the leakage rate testing of the containment as required by 10 CFR 50.54(o) and 10 CFR 50 Appendix J, Option B, as modified by approved exemptions. This program shall be in accordance with the guidelines contained in Regulatory Guide (RG) 1.163, "Performance-Based Containment Leak-Test Program," dated September 1995, with the exception that for the containment isolation valves listed in Table 5.7.2-1, an extension of their Type C local leak rate test is permitted on a one-time basis and expires prior to WBN Unit 2 entering Mode 4, following the Cycle 1 refueling outage, but no later than December 31, 2017.

For containment leakage rate testing purposes, a value of 15.0 psig, which is equivalent to the maximum allowable internal containment pressure, is utilized for P_a to bound the peak calculated containment internal pressure for the design basis loss of coolant accident.

The maximum allowable containment leakage rate, L_a, at P_a, is 0.25% of the primary containment air weight per day.

(continued)

5.7 Procedures, Programs, and Manuals

Table-5.7.2-1

Containment Penetration	Description	Valve number
X-29	RCP oil cooler CCS Return Outboard	FCV-70-92
X-44	RCP Seal Water Return Outboard	FCV-62-63
X-47A	Glycol Supply Inboard	FCV-61-192
		CKV-61-533
	Glycol Supply Outboard	FCV-61-191
X-47B	Glycol Return Inboard	FCV-61-194
		CKV-61-680
	Glycol Return Outboard	FCV-61-193
X-56A	Lower Containment ERCW Supply	FCV-67-113
		CKV-67-1054D
	Lower Containment ERCW Supply	FCV-67-107
X-57A	Lower Containment ERCW Return	FCV-67-111
		CKV-67-575D
		FCV-67-112
X-58A	Lower Containment ERCW Supply	FCV-67-89
		CKV-67-1054A
		FCV-67-83
X-59A	Lower Containment ERCW Return	FCV-67-87
		CKV-67-575A
		FCV-67-88
X-60A	Lower Containment ERCW Supply	FCV-67-105
		CKV-67-1054B
		FCV-67-99
X-61A	Lower Containment ERCW Return	FCV-67-103
		CKV-67-575B
		FCV-67-104
X-62A	Lower Containment ERCW Supply	FCV-67-97
		CKV-67-1054C
		FCV-67-91
X-63A	Lower Containment ERCW Return	FCV-67-95
		CKV-67-575C
		FCV-67-96

(continued)

Enclosure 1

Evaluation of Proposed Technical Specification Change

Attachment 2

Proposed TS Changes (Final Typed) for WBN Unit 2

5.7.2.18 Safety Function Determination Program (SFDP) (continued)

A loss of safety function exists when, assuming no concurrent single failure, a safety function assumed in the accident analysis cannot be performed. For the purpose of this program, a loss of safety function may exist when a support system is inoperable, and:

a. A required system redundant to the system(s) supported by the inoperable support system is also inoperable; or

b. A required system redundant to the system(s) in turn supported by the inoperable supported system is also inoperable; or

c. A required system redundant to the support system(s) for the supported systems (a) and (b) above is also inoperable.

The SFDP identifies where a loss of safety function exists. If a loss of safety function is determined to exist by this program, the appropriate Conditions and Required Actions of the LCO in which the loss of safety function exists are required to be entered.

5.7.2.19 Containment Leakage Rate Testing Program

A program shall be established to implement the leakage rate testing of the containment as required by 10 CFR 50.54(o) and 10 CFR 50 Appendix J, Option B, as modified by approved exemptions. This program shall be in accordance with the guidelines contained in Regulatory Guide (RG) 1.163, "Performance-Based Containment Leak-Test Program," dated September 1995, with the exception that for the containment isolation valves listed in Table 5.7.2-1, an extension of their Type C local leak rate test is permitted on a one-time basis and expires prior to WBN Unit 2 entering Mode 4, following the Cycle 1 refueling outage, but no later than December 31, 2017.

For containment leakage rate testing purposes, a value of 15.0 psig, which is equivalent to the maximum allowable internal containment pressure, is utilized for P_a to bound the peak calculated containment internal pressure for the design basis loss of coolant accident.

The maximum allowable containment leakage rate, L_a, at P_a, is 0.25% of the primary containment air weight per day.

(continued)

Table-5.7.2-1

Containment Penetration	Description	Valve number
X-29	RCP oil cooler CCS Return Outboard	FCV-70-92
X-44	RCP Seal Water Return Outboard	FCV-62-63
X-47A	Glycol Supply Inboard	FCV-61-192
		CKV-61-533
	Glycol Supply Outboard	FCV-61-191
X-47B	Glycol Return Inboard	FCV-61-194
		CKV-61-680
	Glycol Return Outboard	FCV-61-193
X-56A	Lower Containment ERCW Supply	FCV-67-113
		CKV-67-1054D
	Lower Containment ERCW Supply	FCV-67-107
X-57A	Lower Containment ERCW Return	FCV-67-111
		CKV-67-575D
		FCV-67-112
X-58A	Lower Containment ERCW Supply	FCV-67-89
		CKV-67-1054A
		FCV-67-83
X-59A	Lower Containment ERCW Return	FCV-67-87
		CKV-67-575A
		FCV-67-88
X-60A	Lower Containment ERCW Supply	FCV-67-105
		CKV-67-1054B
		FCV-67-99
X-61A	Lower Containment ERCW Return	FCV-67-103
		CKV-67-575B
		FCV-67-104
X-62A	Lower Containment ERCW Supply	FCV-67-97
		CKV-67-1054C
		FCV-67-91
X-63A	Lower Containment ERCW Return	FCV-67-95
		CKV-67-575C
		FCV-67-96

(continued)

Enclosure 2

Watts Bar Nuclear Plant, Unit 2

New Regulatory Commitment

Commitment	Due Date/Event
TVA will, as applicable, perform the Type C LLRTs listed in Table 5.7.2-1 of this proposed amendment, prior to their extended due date, if WBN Unit 2 enters Mode 5 of sufficient duration such that the LLRTs can be performed.	Entry into Mode 5 of sufficient duration such that the Type C LLRTs can be performed