



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

CNL-14-180

January 22, 2015

10 CFR § 50.36(a)

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

Watts Bar Nuclear Plant, Unit 2
Construction Permit No. CPPR-92
NRC Docket No. 50-391

Subject: **Watts Bar Nuclear Plant Unit 2 – Technical Specification
Sections 3.0 and 3.10.1**

Reference: 1. Letter from TVA to NRC, "Watts Bar Nuclear Plant Unit 2 – Submittal of Developmental Revision I of the Unit 2 Technical Specification & Technical Specification Bases and Developmental Revision D of the Unit 2 Technical Requirements Manual and Technical Requirements Manual Bases," dated June 16, 2014 [ADAMS Accession No. ML14169A525]

This letter provides an update to the Tennessee Valley Authority (TVA) Watts Bar Nuclear Plant (WBN) Unit 2 Developmental Revision I Technical Specification (TS) and Technical Specification Bases (TS Bases). The Tennessee Valley Authority proposes to add (1) a new Limiting Condition for Operation (LCO) Applicability requirement, LCO 3.0.9 and its associated Bases, and (2) a new TS 3.10 Special Operations and its associated Bases. Minor associated changes to LCO 3.0.1 and LCO 3.0.7 have also been made. These changes have not been the subject of a prior submittal. The WBN Unit 2 Developmental Revision I of the Unit 2 TS and TS Bases was submitted to the Nuclear Regulatory Commission (NRC) in Reference 1.

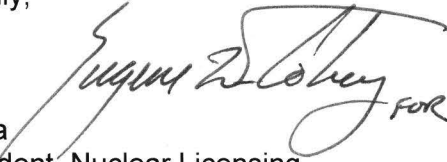
The purpose of the revisions is to permit Mode changes normally precluded by LCO 3.0.4 for those plant conditions where the heat removal capability of the Essential Raw Cooling Water (ERCW) and Component Cooling Water System (CCS) is insufficient to maintain both units in hot shutdown (MODE 4) or cold shutdown (MODE 5). The CCS and ERCW are shared safety systems as defined by General Design Criteria 5. The specific conditions that necessitate this TS change are described in FSAR Section 9.2.1 and 9.2.2.

The enclosure provides the rationale for the change. Attachments 1 through 3 of the enclosure provide marked-up and clean versions of the revised TS and TS Bases sections and the new TS 3.10 Special Operations and associated TS Bases.

There are no new regulatory commitments associated with this submittal. If you have any questions, please contact Gordon Arent at (423) 365-2004.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 22nd day of January 2015.

Respectfully,


J. W. Shea
Vice President, Nuclear Licensing

Enclosure: Tennessee Valley Authority, Watts Bar Nuclear Plant, Unit 2, New
Technical Specification to Support Plant Licensing Basis for Component
Cooling Water and Essential Raw Cooling Water

cc (Enclosure):

NRC Regional Administrator – Region II
NRC Senior Resident Inspector – Watts Bar Nuclear Plant, Unit 2
NRC Project Manager – Watts Bar Nuclear Plant, Unit 2

ENCLOSURE

**TENNESSEE VALLEY AUTHORITY
WATTS BAR NUCLEAR PLANT, UNIT 2**

**New Technical Specification to Support Plant Licensing Basis for
Component Cooling Water and Essential Raw Cooling Water**

ENCLOSURE

WATTS BAR NUCLEAR PLANT, UNIT 2

New Technical Specification to Support Plant Licensing Basis for Component Cooling Water and Essential Raw Cooling Water

A revision is being made to the Watts Bar Nuclear Plant (WBN) Unit 2 Technical Specifications (TS) and TS Bases to allow operation in accordance with the plant design bases as described in Chapter 9 of the WBN Unit 2 Final Safety Analysis Report (FSAR).

The Essential Raw Cooling Water (ERCW) System and the Component Cooling Water System (CCS) are safety systems that are shared by WBN Unit 1 and Unit 2. As such, the systems design conform to the requirements of General Design Criteria (GDC) 5. The ERCW system is described in Section 9.2.1 of the WBN Unit 2 FSAR and the CCS is described in FSAR Section 9.2.2 (Reference 1). As noted in these FSAR sections, the design basis safe shutdown condition for WBN is hot standby (Mode 3). In addition to these FSAR sections, References 2 through 4 provided further details on the conformance of ERCW and CCS to GDC 5.

There are two events where WBN Unit 2 may need to be returned to Mode 3 from Mode 4 or Mode 5, without all of the conditions for a mode change required by the TS being satisfied. The TS requirements for a mode change may not be met as a result of the loss of plant equipment assumed in the design bases evaluation of these events. A change is being made to the WBN Unit 2 TS and TS Bases to permit the unit to return to Mode 3 from a lower mode in the unlikely circumstance that either of these two events occur.

The following two events are being addressed by this TS change.

1. Watts Bar Unit 2 is in Mode 4 or Mode 5. A loss of coolant accident (LOCA) occurs on Unit 1. Coincidentally, offsite power is lost and a single failure occurs that results in the loss of an emergency power train.
2. A simultaneous or near simultaneous shutdown of both units occurs. The units are being cooled down. The units may be in Mode 4 or Mode 5, a loss of offsite power occurs, and simultaneously there is the loss of an emergency power train.

The single failure assumed for these events is the loss of an emergency power train. The loss of offsite power in conjunction with this single failure will result in the loss of two 6.9 Kilovolt Shutdown Boards. The loss of offsite power and this single failure results in a limited number of ERCW and CCS pumps being available, and limits the number of CCS heat exchangers available.

The LOCA event is described in FSAR Sections 9.2.1 and 9.2.2 as possibly requiring the non-accident unit to return to Mode 3. The FSAR contains the following statements.

- If one unit is in an accident condition, the other unit should be maintained at hot standby (if it can not be maintained in its operating mode) until the accident unit cooldown is accomplished.
- If the non-accident unit is utilizing Residual Heat Removal (RHR) cooling, it may be necessary to close the Component Cooling System (CCS) supply

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WATTS BAR NUCLEAR PLANT, UNIT 2

New Technical Specification to Support Plant Licensing Basis for Component Cooling Water and Essential Raw Cooling Water

to these heat exchangers. Core cooling using RHR may be terminated when the non-accident unit is in RHR cooldown.

When RHR cooling is terminated, the non-accident unit will be allowed to return to hot standby. After the decay heat load from both units has dropped to the point where RHR cooling can be provided to both the accident and non-accident unit, the non-accident unit may be brought to cold shutdown.

Assuming a LOCA on WBN Unit 1 in Mode 1 with Unit 2 in Mode 4 or 5 is more limiting than assuming a Mode 4 or Mode 5 starting point for both units. The decay heat for a unit in Mode 1 will be higher than a unit that has been shutdown even for a brief period of time and there is more latent heat in the RCS when a unit is in Mode 1 versus a unit in Mode 4 or 5. The plant behavior post loss of offsite power with the loss of a power train single failure is very similar to the LOCA event described in the FSAR. One unit can proceed to or stay on RHR for decay heat removal. The other unit will return to Mode 3 until the decay heat load from both units has dropped to the point that the second unit can be placed on RHR cooling and be brought to cold shutdown.

As described in FSAR Section 9.2.2, there is sufficient ERCW and CCS capability to meet the GDC 5 requirement to bring the non-accident unit to cold shutdown. The non-accident unit can reach cold shutdown within 72 hours from entry into the Hot Standby mode. A cooldown analysis for the non-accident unit assumes that its decay heat will be removed by the Steam Generators (SGs) and SG Safety Valves until such time that its decay heat has decreased sufficiently that the total decay heat (constant accident unit decay heat plus decreasing non-accident unit decay heat) is less than the capability of ERCW and CCS. The analysis is performed with CCS carrying all required loads on both the accident and (later in the event) the non-accident unit, including the Spent Fuel Pool.

The attachments listed below provide the marked-up and clean pages of TS 3.0 and associated TS Bases and new TS 3.10 and associated bases to permit operation for the design basis conditions described above.

- ATTACHMENT 1** - WBN Unit 2 Developmental Revision I TS and TS Bases Marked-Up Pages for 3.0 Limiting Condition for Operation (LCO) Applicability
- ATTACHMENT 2** - New WBN Unit 2 Developmental Revision I TS and TS Bases Section 3.10 Special Operations (B 3.10.1 LCO 3.0.4 Exception)
- ATTACHMENT 3** - WBN Unit 2 Developmental Revision I TS and TS Bases Re-Typed Pages for 3.0 Limiting Condition for Operation (LCO) Applicability

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WATTS BAR NUCLEAR PLANT, UNIT 2

New Technical Specification to Support Plant Licensing Basis for Component Cooling Water and Essential Raw Cooling Water

References:

1. Watts Bar Nuclear Plant Unit 2, Final Safety Analysis Report, Section 9.2.1 Essential Raw Cooling Water and Section 9.2.2, Component Cooling Water
2. Letter from TVA to NRC dated December 10, 2010, "Watts Bar Nuclear Plant (WBN) Unit 2 – Final Safety Analysis Report (FSAR) – Response to Requests for Additional Information" (ADAMS Accession Number ML103480708)
3. Letter from TVA to NRC dated April 13, 2011, "Watts Bar Nuclear Plant (WBN) Unit 2 – Final Safety Analysis Report (FSAR) – Response to Requests for Additional Information (RAIs) Related to FSAR Sections 9.2.1 and 9.2.2"
4. Letter from TVA to NRC dated June 12, 2014, "Watts Bar Nuclear Plant, Unit 2 - Request for Additional Information Regarding Final Safety Analysis Report Amendment Related to Section 9.2 Component Cooling System"

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WATTS BAR NUCLEAR PLANT, UNIT 2

**New Technical Specification to Support Plant Licensing Basis for
Component Cooling Water and Essential Raw Cooling Water**

ATTACHMENT 1

**WBN Unit 2 Developmental Revision I TS and TS Bases Marked-Up Pages for
3.0 Limiting Condition for Operation (LCO) Applicability**

NOTE: Mark-up deletions identified by bold strikethrough (~~**deletion**~~) and additions identified by bold underline (**addition**).

ENCLOSURE

WATTS BAR NUCLEAR PLANT, UNIT 2

New Technical Specification to Support Plant Licensing Basis for Component Cooling Water and Essential Raw Cooling Water

LCO Applicability
3.0

3.0 LIMITING CONDITION FOR OPERATION (LCO) APPLICABILITY

LCO 3.0.1	LCOs shall be met during the MODES or other specified conditions in the Applicability, except as provided in LCO 3.0.2, <u>3.0.7, and 3.0.9</u> .
LCO 3.0.2	<p>Upon discovery of a failure to meet an LCO, the Required Actions of the associated Conditions shall be met, except as provided in LCO 3.0.5 and LCO 3.0.6.</p> <p>If the LCO is met or is no longer applicable prior to expiration of the specified Completion Time(s), completion of the Required Action(s) is not required unless otherwise stated.</p>
LCO 3.0.3	<p>When an LCO is not met and the associated ACTIONS are not met, an associated ACTION is not provided, or if directed by the associated ACTIONS the unit shall be placed in a MODE or other specified condition in which the LCO is not applicable. Action shall be initiated within 1 hour to place the unit, as applicable, in:</p> <ol style="list-style-type: none">MODE 3 within 7 hours;MODE 4 within 13 hours; andMODE 5 within 37 hours. <p>Exceptions to this Specification are stated in the individual Specifications.</p> <p>Where corrective measures are completed that permit operation in accordance with the LCO or ACTIONS, completion of the actions required by LCO 3.0.3 is not required.</p> <p>LCO 3.0.3 is only applicable in MODES 1, 2, 3, and 4.</p>
LCO 3.0.4	<p>When an LCO is not met, entry into a MODE or other specified condition in the Applicability shall only be made:</p> <ol style="list-style-type: none">When the associated ACTIONS to be entered permit continued operation in the MODE or other specified condition in the Applicability for an unlimited period of time;

(continued)

Watts Bar - Unit 2
(developmental)

3.0-1

Revision **AJ**

ENCLOSURE

WATTS BAR NUCLEAR PLANT, UNIT 2

New Technical Specification to Support Plant Licensing Basis for Component Cooling Water and Essential Raw Cooling Water

LCO Applicability
3.0

3.0 LCO APPLICABILITY (continued)

LCO 3.0.7 Test Exception LCOs 3.1.9 and 3.1.10 allow specified Technical Specification (TS) requirements to be changed to permit performance of special tests ~~and operations~~. Unless otherwise specified, all other TS requirements remain unchanged. Compliance with Test Exception LCOs is optional. When a Test Exception LCO is desired to be met but is not met, the ACTIONS of the Test Exception LCO shall be met. When a Test Exception LCO is not desired to be met, entry into a MODE or other specified condition in the Applicability shall be made in accordance with the other applicable Specifications.

LCO 3.0.8 When one or more required snubbers are unable to perform their associated support function(s), any affected supported LCO(s) are not required to be declared not met solely for this reason if risk is assessed and managed, and:

- a. the snubbers not able to perform their associated support function(s) are associated with only one train or subsystem of a multiple train or subsystem supported system or are associated with a single train or subsystem supported system and are able to perform their associated support function within 72 hours; or
- b. the snubbers not able to perform their associated support function(s) are associated with more than one train or subsystem of a multiple train or subsystem supported system and are able to perform their associated support function within 12 hours.

At the end of the specified period the required snubbers must be able to perform their associated support function(s), or the affected supported system (LCOs) shall be declared not met.

LCO 3.0.9 **Special Operation LCO 3.10.1 allows specified TS requirements to be suspended to permit performance of special operations. Unless otherwise specified, all other TS requirements remain unchanged. Compliance with Special Operations LCOs is optional. When a Special Operation LCO is desired to be met but is not met, the ACTIONS of the Special Operation LCO shall be met. When a Special Operation LCO is not desired to be met, entry into a MODE or other specified condition in the Applicability shall be made in accordance with the other applicable Specifications.**

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(developmental)

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WATTS BAR NUCLEAR PLANT, UNIT 2

New Technical Specification to Support Plant Licensing Basis for Component Cooling Water and Essential Raw Cooling Water

LCO Applicability
B 3.0

B 3.0 LIMITING CONDITION FOR OPERATION (LCO) APPLICABILITY

BASES

LCOs	LCO 3.0.1 through LCO 3.0.7 3.0.9 establish the general requirements applicable to all Specifications and apply at all times, unless otherwise stated.
LCO 3.0.1	LCO 3.0.1 establishes the Applicability statement within each individual Specification as the requirement for when the LCO is required to be met (i.e., when the unit is in the MODES or other specified conditions of the Applicability statement of each Specification).
LCO 3.0.2	<p>LCO 3.0.2 establishes that upon discovery of a failure to meet an LCO, the associated ACTIONS shall be met. The Completion Time of each Required Action for an ACTIONS Condition is applicable from the point in time that an ACTIONS Condition is entered. The Required Actions establish those remedial measures that must be taken within specified Completion Times when the requirements of an LCO are not met. This Specification establishes that:</p> <ul style="list-style-type: none">a. Completion of the Required Actions within the specified Completion Times constitutes compliance with a Specification; andb. Completion of the Required Actions is not required when an LCO is met within the specified Completion Time, unless otherwise specified. <p>There are two basic types of Required Actions. The first type of Required Action specifies a time limit in which the LCO must be met. This time limit is the Completion Time to restore an inoperable system or component to OPERABLE status or to restore variables to within specified limits. If this type of Required Action is not completed within the specified Completion Time, a shutdown may be required to place the unit in a MODE or condition in which the Specification is not applicable. (Whether stated as a Required Action or not, correction of the entered Condition is an action that may always be considered upon entering ACTIONS.) The second type of Required Action specifies the remedial measures that permit continued operation of the unit that is not further restricted by the Completion Time. In this case, compliance with the Required Actions provides an acceptable level of safety for continued operation.</p>

(continued)

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B 3.0-1

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WATTS BAR NUCLEAR PLANT, UNIT 2

New Technical Specification to Support Plant Licensing Basis for Component Cooling Water and Essential Raw Cooling Water

LCO Applicability
B 3.0

BASES (continued)

LCO 3.0.8
(continued)

LCO 3.0.8 requires that risk be assessed and managed. Industry and NRC guidance on the implementation of 10 CFR 50.65(a)(4) (the Maintenance Rule) does not address seismic risk. However, use of LCO 3.0.8 should be considered with respect to other plant maintenance activities, and integrated into the existing Maintenance Rule process to the extent possible so that maintenance on any unaffected train or subsystem is properly controlled, and emergent issues are properly addressed. The risk assessment need not be quantified, but may be a qualitative awareness of the vulnerability of systems and components when one or more snubbers are not able to perform their associated support function.

LCO 3.0.9

There are certain special operations required to be performed at various times over the life of the plant. These special operations are necessary to perform special evolutions.

Special Operations LCO 3.10.1 allows specified TS requirements to be suspended to permit performances of these special operations, which otherwise could not be performed if required to comply with the requirements of these TS. Unless otherwise specified, all the other TS requirements remain unchanged. This will ensure all appropriate requirements of the MODE or other specified condition not directly associated with or required to be changed to perform the special operation will remain in effect.

The Applicability of a Special Operation LCO represents a condition not necessarily in compliance with the normal requirements of the TS. Compliance with Special Operations LCOs is optional. A special operation may be performed either under the provisions of the appropriate Special Operation LCO or under the other applicable TS requirements. If it is desired to perform the special operation under the provisions of the Special Operation LCO, the requirements of the Special Operation LCO shall be followed.

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B 3.0-12

Revision **AJ**

ENCLOSURE

WATTS BAR NUCLEAR PLANT, UNIT 2

**New Technical Specification to Support Plant Licensing Basis for
Component Cooling Water and Essential Raw Cooling Water**

Attachment 2

**New WBN Unit 2 Developmental Revision I TS and TS Bases 3.10 Special Operations
(3.10.1 LCO 3.0.4 Exception)**

ENCLOSURE

WATTS BAR NUCLEAR PLANT, UNIT 2

New Technical Specification to Support Plant Licensing Basis for Component Cooling Water and Essential Raw Cooling Water

LCO 3.0.4 Exception
3.10.1

3.10 SPECIAL OPERATIONS

3.10.1 LCO 3.0.4 Exception

LCO 3.10.1 The requirements of LCO 3.0.4, and all other LCO Required Actions requiring MODE changes, may be suspended for ≤ 48 hours for entry into MODE 4 from MODE 5 and for entry into MODE 3 from MODE 4, if offsite power is unavailable and Train A or Train B AC electric power is inoperable for the following conditions:

- a. Unit 1 in MODE 4 or MODE 5, or
- b. Unit 1 experiencing a LOCA.

APPLICABILITY: MODES 3, 4, and 5.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Requirements of LCO 3.0.4 suspended for > 48 hours.	A.1 Restore AC Power to an OPERABLE status.	24 hours
	<u>OR</u> A.2 Be in MODE 5.	24 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.10.1.1 Verify the requirements of LCO 3.0.4 have been suspended for ≤ 48 hours.	4 hours

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3.10-1

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WATTS BAR NUCLEAR PLANT, UNIT 2

New Technical Specification to Support Plant Licensing Basis for Component Cooling Water and Essential Raw Cooling Water

B 3.10 SPECIAL OPERATIONS

B 3.10.1 LCO 3.0.4 Exception

LCO 3.0.4 Exception

B 3.10.1

BASES

BACKGROUND

The purpose of this Special Operations LCO is to permit MODE changes normally precluded by LCO 3.0.4 for those plant conditions where the heat removal capacity of the Essential Raw Cooling Water (ERCW) and Component Cooling Water System (CCS) is insufficient to maintain both units in cold shutdown or hot shutdown.

The ERCW system and CCS are shared safety systems for Watts Bar Nuclear Plant (WBN) Units 1 and 2.

The ERCW system is arranged in two headers (trains) each serving certain components in each unit. There are eight ERCW pumps arranged electrically so that two pumps are fed from each shutdown board (1A-A, 1B-B, 2A-A, and 2B-B). The minimum combined safety requirements for one accident unit and one non-accident unit are met by only two pumps on one header (train) (Ref. 1).

The CCS provides a heat sink for the removal of process and operating heat from safety-related components during a Design Basis Accident (DBA) or transient. During normal operation, the CCS also provides this function for various non-essential components, as well as the spent fuel storage pool. The principal safety-related function of the CCS is the removal of decay heat from the reactor via the Residual Heat Removal (RHR) System. This may be during a normal or post accident cool down and shut down (Ref. 2).

APPLICABLE SAFETY ANALYSES

During certain plant conditions that result in a total amount of decay heat between the units that exceeds the capacity of ERCW and CCS, the ability to maintain the units in a cold shutdown or hot shutdown condition with the exclusive use of the RHR System may not be possible. However, the heat removal capacity of ERCW and CCS is sufficient to place an accident unit or one shutdown unit (WBN Unit 1) in cold shutdown and maintain the non-accident unit (WBN Unit 2) in a safe shutdown condition (hot standby).

(continued)

Watts Bar-Unit 2
(developmental)

B 3.10-1

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ENCLOSURE

WATTS BAR NUCLEAR PLANT, UNIT 2

New Technical Specification to Support Plant Licensing Basis for Component Cooling Water and Essential Raw Cooling Water

LCO 3.0.4 Exception
B 3.10.1

BASES (continued)

APPLICABLE
SAFETY
ANALYSES
(continued)

An analysis demonstrates that there is sufficient ERCW and CCS capability to bring the non-accident unit to cold shutdown. The non-accident unit can reach cold shutdown within 72 hours from entry into hot standby. The supporting cooldown analysis was performed with CCS carrying all required loads on both the accident and (later in the event) the non-accident unit, including the Spent Fuel Pool. The core decay heat used in the analysis was consistent with the decay heat used in the normal cooldown analysis. Once RHR is placed in-service, credit for decay heat removal by the steam generators is no longer taken (Ref. 3).

Allowing the reactor to change MODES when ERCW and CCS lacks sufficient heat removal capability to maintain both units in a cold shutdown or hot shutdown condition is consistent with the design and licensing basis for maintaining non-accident units in a safe shutdown condition.

LCO

As described in LCO 3.0.9, compliance with this Special Operations LCO is optional.

The conditions that may require suspension of the requirements of LCO 3.0.4 include a loss of offsite power and a loss of one train of AC electrical power; Unit 1 in MODE 4, MODE 5, or experiencing a loss of coolant accident (LOCA); and Unit 2 in MODE 4 or 5.

When the heat removal capacity of ERCW and CCS is insufficient to remove the decay heat and/or accident heat loads for Unit 1 and maintain Unit 2 in a cold shutdown or hot shutdown condition, the requirements of LCO 3.0.4 may be suspended to allow the unit to remain in or heatup and return to MODE 3.

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Watts Bar-Unit 2
(developmental)

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WATTS BAR NUCLEAR PLANT, UNIT 2

New Technical Specification to Support Plant Licensing Basis for Component Cooling Water and Essential Raw Cooling Water

LCO 3.0.4 Exception
B 3.10.1

BASES (continued)

LCO (continued)	The suspension of the requirements of LCO 3.0.4 is limited to 48 hours, at which time the ACTIONS require restoration of AC Power or placing the unit in MODE 5. The LCO and Required Action Completion Times assure that there is sufficient ERCW and CCS capability to bring a non-accident unit to cold shutdown within 72 hours from entry into hot standby.
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APPLICABILITY	<p>In MODE 4 and in MODE 5, the heat removal capability of ERCW and CCS may be insufficient to prevent the unit from heating up and changing MODES, depending on the time after shutdown, the availability of AC electrical power to two trains of CCS pumps, and the heat load to CCS from Unit 1.</p> <p>When the combination of plant conditions precludes maintaining the unit in cold shutdown, the requirements of LCO 3.0.4 and all other LCO Required Actions requiring MODE changes may be suspended to allow Unit 2 to change from MODE 5 to MODE 4 and from MODE 4 to MODE 3 when one or more LCOs are not met.</p> <p>In MODES 1 and 2, the suspension of the requirements of LCO 3.0.4 based on the heat removal capability of ERCW and CCS is unnecessary.</p> <p>In MODE 6, the decay heat from the reactor is well within the capability of ERCW and CCS, regardless of the availability of two trains of AC electrical power and the heat load to CCS from Unit 1. Therefore, suspension of the requirements of LCO 3.0.4 is unnecessary.</p>
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Watts Bar-Unit 2
(developmental)

B 3.10-3

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WATTS BAR NUCLEAR PLANT, UNIT 2

New Technical Specification to Support Plant Licensing Basis for Component Cooling Water and Essential Raw Cooling Water

LCO 3.0.4 Exception
B 3.10.1

BASES (continued)

ACTIONS A.1 and A.2

With the requirements of the LCO not met, the plant conditions that form the basis for suspending the requirements of LCO 3.0.4 no longer exist. Therefore, focus is placed on either restoring the AC electrical power or placing the unit in MODE 5. The Completion Time of 24 hours is sufficient time to place the unit in cold shutdown with the reduced capabilities of ERCW and CCS 48 hours or more after the unit has been shutdown to a hot standby condition.

SURVEILLANCE REQUIREMENTS SR 3.10.1.1

Periodic verification that the requirements of LCO 3.0.4 have not been suspended for more than 48 hours ensures the basis for suspending the requirements of LCO 3.0.4 is maintained. Otherwise, the decay heat being generated by the units is with the reduced capability of ERCW and CCS, and the need to suspend the requirements of LCO 3.0.4 is no longer necessary.

REFERENCES

1. FSAR Section 8.3.1, "AC Power System"
2. FSAR Section 9.2.2, "Component Cooling System"
3. FSAR Section 9.2.1, "Essential Raw Cooling Water "

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WATTS BAR NUCLEAR PLANT, UNIT 2

**New Technical Specification to Support Plant Licensing Basis for
Component Cooling Water and Essential Raw Cooling Water**

Attachment 3

**WBN Unit 2 Developmental Revision I TS and TS Bases Re-Typed Pages for 3.0 Limiting
Condition for Operation (LCO) Applicability**

ENCLOSURE

WATTS BAR NUCLEAR PLANT, UNIT 2

New Technical Specification to Support Plant Licensing Basis for Component Cooling Water and Essential Raw Cooling Water

LCO Applicability
3.0

3.0 LIMITING CONDITION FOR OPERATION (LCO) APPLICABILITY

LCO 3.0.1	LCOs shall be met during the MODES or other specified conditions in the Applicability, except as provided in LCO 3.0.2, 3.0.7, and 3.0.9.
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LCO 3.0.2	Upon discovery of a failure to meet an LCO, the Required Actions of the associated Conditions shall be met, except as provided in LCO 3.0.5 and LCO 3.0.6.
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If the LCO is met or is no longer applicable prior to expiration of the specified Completion Time(s), completion of the Required Action(s) is not required unless otherwise stated.

LCO 3.0.3	When an LCO is not met and the associated ACTIONS are not met, an associated ACTION is not provided, or if directed by the associated ACTIONS the unit shall be placed in a MODE or other specified condition in which the LCO is not applicable. Action shall be initiated within 1 hour to place the unit, as applicable, in:
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- a. MODE 3 within 7 hours;
- b. MODE 4 within 13 hours; and
- c. MODE 5 within 37 hours.

Exceptions to this Specification are stated in the individual Specifications.

Where corrective measures are completed that permit operation in accordance with the LCO or ACTIONS, completion of the actions required by LCO 3.0.3 is not required.

LCO 3.0.3 is only applicable in MODES 1, 2, 3, and 4.

LCO 3.0.4	When an LCO is not met, entry into a MODE or other specified condition in the Applicability shall only be made: <ul style="list-style-type: none">a. When the associated ACTIONS to be entered permit continued operation in the MODE or other specified condition in the Applicability for an unlimited period of time;
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(continued)

Watts Bar - Unit 2
(developmental)

3.0-1

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WATTS BAR NUCLEAR PLANT, UNIT 2

New Technical Specification to Support Plant Licensing Basis for Component Cooling Water and Essential Raw Cooling Water

LCO Applicability
3.0

3.0 LCO APPLICABILITY (continued)

LCO 3.0.7	Test Exception LCOs 3.1.9 and 3.1.10 allow specified Technical Specification (TS) requirements to be changed to permit performance of special tests. Unless otherwise specified, all other TS requirements remain unchanged. Compliance with Test Exception LCOs is optional. When a Test Exception LCO is desired to be met but is not met, the ACTIONS of the Test Exception LCO shall be met. When a Test Exception LCO is not desired to be met, entry into a MODE or other specified condition in the Applicability shall be made in accordance with the other applicable Specifications.
LCO 3.0.8	<p>When one or more required snubbers are unable to perform their associated support function(s), any affected supported LCO(s) are not required to be declared not met solely for this reason if risk is assessed and managed, and:</p> <ul style="list-style-type: none">a. the snubbers not able to perform their associated support function(s) are associated with only one train or subsystem of a multiple train or subsystem supported system or are associated with a single train or subsystem supported system and are able to perform their associated support function within 72 hours; orb. the snubbers not able to perform their associated support function(s) are associated with more than one train or subsystem of a multiple train or subsystem supported system and are able to perform their associated support function within 12 hours. <p>At the end of the specified period the required snubbers must be able to perform their associated support function(s), or the affected supported system (LCOs) shall be declared not met.</p>
LCO 3.0.9	Special Operation LCO 3.10.1 allows specified TS requirements to be suspended to permit performance of special operations. Unless otherwise specified, all other TS requirements remain unchanged. Compliance with Special Operations LCOs is optional. When a Special Operation LCO is desired to be met but is not met, the ACTIONS of the Special Operation LCO shall be met. When a Special Operation LCO is not desired to be met, entry into a MODE or other specified condition in the Applicability shall be made in accordance with the other applicable Specifications.

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ENCLOSURE

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LCO Applicability
B 3.0

B 3.0 LIMITING CONDITION FOR OPERATION (LCO) APPLICABILITY

BASES

LCOs	LCO 3.0.1 through LCO 3.0.9 establish the general requirements applicable to all Specifications and apply at all times, unless otherwise stated.
LCO 3.0.1	LCO 3.0.1 establishes the Applicability statement within each individual Specification as the requirement for when the LCO is required to be met (i.e., when the unit is in the MODES or other specified conditions of the Applicability statement of each Specification).
LCO 3.0.2	<p>LCO 3.0.2 establishes that upon discovery of a failure to meet an LCO, the associated ACTIONS shall be met. The Completion Time of each Required Action for an ACTIONS Condition is applicable from the point in time that an ACTIONS Condition is entered. The Required Actions establish those remedial measures that must be taken within specified Completion Times when the requirements of an LCO are not met. This Specification establishes that:</p> <ul style="list-style-type: none">c. Completion of the Required Actions within the specified Completion Times constitutes compliance with a Specification; andd. Completion of the Required Actions is not required when an LCO is met within the specified Completion Time, unless otherwise specified. <p>There are two basic types of Required Actions. The first type of Required Action specifies a time limit in which the LCO must be met. This time limit is the Completion Time to restore an inoperable system or component to OPERABLE status or to restore variables to within specified limits. If this type of Required Action is not completed within the specified Completion Time, a shutdown may be required to place the unit in a MODE or condition in which the Specification is not applicable. (Whether stated as a Required Action or not, correction of the entered Condition is an action that may always be considered upon entering ACTIONS.) The second type of Required Action specifies the remedial measures that permit continued operation of the unit that is not further restricted by the Completion Time. In this case, compliance with the Required Actions provides an acceptable level of safety for continued operation.</p>

(continued)

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LCO Applicability
B 3.0

BASES (continued)

LCO 3.0.8
(continued)

LCO 3.0.8 requires that risk be assessed and managed. Industry and NRC guidance on the implementation of 10 CFR 50.65(a)(4) (the Maintenance Rule) does not address seismic risk. However, use of LCO 3.0.8 should be considered with respect to other plant maintenance activities, and integrated into the existing Maintenance Rule process to the extent possible so that maintenance on any unaffected train or subsystem is properly controlled, and emergent issues are properly addressed. The risk assessment need not be quantified, but may be a qualitative awareness of the vulnerability of systems and components when one or more snubbers are not able to perform their associated support function.

LCO 3.0.9

There are certain special operations required to be performed at various times over the life of the plant. These special operations are necessary to perform special evolutions.

Special Operations LCO 3.10.1 allows specified TS requirements to be suspended to permit performances of these special operations, which otherwise could not be performed if required to comply with the requirements of these TS. Unless otherwise specified, all the other TS requirements remain unchanged. This will ensure all appropriate requirements of the MODE or other specified condition not directly associated with or required to be changed to perform the special operation will remain in effect.

The Applicability of a Special Operation LCO represents a condition not necessarily in compliance with the normal requirements of the TS. Compliance with Special Operations LCOs is optional. A special operation may be performed either under the provisions of the appropriate Special Operation LCO or under the other applicable TS requirements. If it is desired to perform the special operation under the provisions of the Special Operation LCO, the requirements of the Special Operation LCO shall be followed.

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