

Proposed Path Forward on TSTF-568, "Clarify Applicability of BWR/4 TS 3.6.2.5 and TS 3.6.3.2"

TSTF-568 Background

- TSTF-568, Rev. 0, "Clarify Applicability of BWR/4 TS 3.6.2.5 and TS 3.6.3.2,"
 - Applicable to BWR plants with Mark I and Mark II containments (BWR/2, /3, /4, and /5 plants)
 - Submitted December 19, 2017
 - NRC issued acceptance letter and review schedule on March 8, 2018

TSTF-568 Status

- At the August 9, 2018 TSTF/NRC public meeting, the NRC stated that they support the change to TS 3.6.2.5, Drywell-to-Suppression Chamber Differential Pressure
 - Only applicable to three BWR plants (Dresden, Fitzpatrick, and Quad Cities)

TSTF-568 Status

- NRC stated they cannot support the change to TS 3.6.3.2, Primary Containment Oxygen Concentration
 - Applicable to all BWR/2, BWR/3, BWR/4, and BWR/5 units
- The NRC does not agree with the existing justification of "As long as reactor power is < 15% RTP, the potential for an event that generates significant hydrogen is low and the primary containment need not be inert."
- While the risk to the public is too small to warrant a backfit on the issue, the NRC staff is not comfortable with issuing a change to the TS that relies on that justification.
 - The TSTF was unable to find supporting analysis for the statement and accepts the NRC position.

TSTF-568 Proposed Revision

- The TSTF has revised the traveler to address the staff concerns:
 - Revise the TS 3.6.2.5, "Drywell-to-Suppression Chamber Differential Pressure," Applicability to Mode 1 with thermal power > [15]%.
 - Supported by the analysis referenced in TSTF-568.
 - Revise the TS 3.6.3.2, "Primary Containment Oxygen Concentration," Applicability to Mode 1.
 - Addresses the NRC staff concern.
 - TS 3.6.3.2 Required Action B.1 is revised to require being in Mode 2 in 8 hours

TSTF-568 Proposed Revision

— For both TS:

- The existing Applicability exceptions are eliminated.
- Required Action A.1 (restore the value to within limit) is changed from 8 and 24 hours to 72 hours.
- A Note is applied to Required Action A.1 permitting the use of LCO 3.0.4.c to enter the Applicability with the LCO not met.
- The Required Action A.1 and the Note will be used instead of the existing Applicability exceptions to permit entering the Applicability with the limit not met during a startup, and to enter the action prior to exiting the Applicability on a shutdown
- The Bases will state that entering Required Action A.1 prior to a shutdown without intention to restore compliance prior to exiting the Applicability is acceptable in this case.

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- The Required Action A.1 Completion Time of 72 hours is based on:
 - The time to perform on-line maintenance at low power (typically < 15% RTP) requiring primary containment or suppression pool entry.
 - De-inert the primary containment and suppression pool while reducing power to permit containment entry (24 hours) (existing allowance),
 - Perform on-line maintenance in containment (24 hours), and
 - Re-inert the primary containment and suppression pool while increasing to full power (24 hours) (existing allowance).
 - The low probability of an event that would generate significant hydrogen and require primary containment to be inert.

Drywell-to-Suppression Chamber Differential Pressure 3.6.2.5

3.6 CONTAINMENT SYSTEMS

3.6.2.5 Drywell-to-Suppression Chamber Differential Pressure

LCO 3.6.2.5 The drywell pressure shall be maintained \geq [1.5] psid above the pressure of the suppression chamber.

APPLICABILITY: MODE 1 ~~with THERMAL POWER $>$ [15]% RTP. during the time period: with THERMAL POWER $>$ [15]% RTP~~

- ~~a. From [24] hours after THERMAL POWER is $>$ [15]% RTP following startup, to~~
- ~~b. [24] hours prior to reducing THERMAL POWER to $<$ [15]% RTP prior to the next scheduled reactor shutdown.~~

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Drywell-to-suppression chamber differential pressure not within limit.	A.1 NOTE LCO 3.0.4.c is applicable. Restore differential pressure to within limit.	72 8 hours
B. Required Action and associated Completion Time not met.	B.1 Reduce THERMAL POWER to \leq [15]% RTP.	12 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.6.2.5.1 Verify drywell-to-suppression chamber differential pressure is within limit.	[12 hours OR In accordance with the Surveillance Frequency Control Program]

Primary Containment Oxygen Concentration 3.6.3.2

3.6 CONTAINMENT SYSTEMS

3.6.3.2 Primary Containment Oxygen Concentration

LCO 3.6.3.2 The primary containment oxygen concentration shall be $<$ 4.0 volume percent.

APPLICABILITY: MODE 1. ~~during the time period:~~

- ~~a. From [24] hours after THERMAL POWER is $>$ [15]% RTP following startup, to~~
- ~~b. [24] hours prior to reducing THERMAL POWER to $<$ [15]% RTP prior to the next scheduled reactor shutdown.~~

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Primary containment oxygen concentration not within limit.	A.1 NOTE LCO 3.0.4.c is applicable. Restore oxygen concentration to within limit.	72 24 -hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 2 Reduce THERMAL POWER to \leq [15]% RTP.	8 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.6.3.2.1 Verify primary containment oxygen concentration is within limits.	[7 days OR In accordance with the Surveillance Frequency Control Program]

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Discussion