Industry/TSTF Standard Technical Specification Change Traveler

Add an LCO item and SR to Mode 2 Physics Tests Exceptions to verify that Thermal Power <= 5% RTP.

Priority/Classification 1) Correct Specifications

NUREGs Affected: ☐ 1430 ☑ 1431 ☐ 1432 ☐ 1433 ☐ 1434

Description:

Add an LCO requirement and SR to Mode 2 Physics Tests Exceptions 3.1.10 to verify that Thermal Power <= 5% RTP. Deleted references in the Bases to Physics Tests to tests performed in Mode 1 as this Tech Spec only applies to tests performed in Mode 2. Deleted the reference to Mode 2 in the Applicability.

Justification:

This LCO requirements and SR were added to verify that Thermal Power is within the defined power level for Mode 2 during performance of Physics Tests, since there is an action that addresses Thermal Power not within limit and no corresponding LCO or surveillance.
The Bases references to Physics Tests performed in Mode 1 were unnecessary as this specification refers only to tests performed in Mode 2.
The explicit reference to Mode 2 in the Applicability is unnecessary as the LCO limits the use of the Test Exception to power levels less than 5% (the upper limit of Mode 2).

Revision History

OG Revision 0 Revision Status: Closed

Revision Proposed by:

Revision Description:
Original Issue

Owners Group Review Information

Date Originated by OG: 11-Mar-95

Owners Group Comments
WOG-04, C.6

Owners Group Resolution: Approved Date: 11-Aug-95

TSTF Review Information

TSTF Received Date: 05-Sep-95 Date Distributed for Review 05-Sep-95

OG Review Completed: ☑ BWOG ☑ WOG ☑ CEOG ☑ BWROG

TSTF Comments:
(No Comments)

TSTF Resolution: Approved Date: 05-Sep-95

NRC Review Information

NRC Received Date: 03-Oct-95 NRC Reviewer: R. Tjader

NRC Comments:

10/4/95 - R. Tjader approved change, pkg to TSB mgmt.
11/17/95 - C. Grimes approved change.
1/20/96 changes processed. Completion of pkg. waiting on completion of TSTF-12.

Final Resolution: NRC Approves Final Resolution Date: 17-Nov-95

TSTF Revision 1 Revision Status: Closed

Revision Proposed by: TSTF

Revision Description:
Remarked the pages to use TSTF number instead of OG number.
The Tech Spec markup contains other changes not discussed in the Discussion or Justification. The TSTF package was WOG-4, C.6 only, but changes WOG-4, C.1 and C.4 were included in the TSTF package. These were removed.

TSTF Review Information

TSTF Received Date: 08-Jan-96 Date Distributed for Review 08-Jan-96

OG Review Completed: ☑ BWOG ☑ WOG ☑ CEOG ☑ BWROG

TSTF Comments:
(No Comments)

TSTF Resolution: Approved Date: 08-Jan-96

NRC Review Information

NRC Received Date: 08-Jan-96 NRC Reviewer: R. Tjader

NRC Comments:
(No Comments)

Final Resolution: Superceded by Revision Final Resolution Date: 28-May-96

TSTF Revision 2 Revision Status: Closed

Revision Proposed by: TSTF

Revision Description:
Added a LCO requirement in addition to the surveillance.

TSTF Review Information

TSTF Received Date: 15-Jan-96 Date Distributed for Review 15-Jan-96

OG Review Completed: ☑ BWOG ☑ WOG ☑ CEOG ☑ BWROG

TSTF Comments:
(No Comments)

TSTF Resolution: Approved Date: 28-May-96

NRC Review Information

NRC Received Date: 28-May-96 NRC Reviewer: R. Tjader

NRC Comments:

6/12/96 - -Reviewer completed review. Reviewer's comment: Change is a matter of preference and editorial. Adding "c. Thermal Power <= 5% RTP," to LCO and Bases adds clarity and should be approved. Removing "Mode 2" from Applicability and Bases does not enhance clarity. Except for a few refueling LCOs, all other LCOs refer to a Mode. Prefer "Mode 2" be retained in the Applicability section.
Note: TSTF-14, R. 2 was submitted by TSB reviewer on 6/12/96 for his review.
6/11/96 - C. Grimes comment: TSTF-14, R. 1 was approved.
9/18/96 - NRC requested revision to retain Mode 2 in the applicability. TSTF agreed and will prepare revision.
10/15/96 - New revision forwarded to the TSTF for review.

Final Resolution: Superceded by Revision Final Resolution Date: 23-Jan-97

TSTF Revision 3 Revision Status: Closed

Revision Proposed by: NRC

Revision Description:
Reviewer completed review. Reviewer's comment: Change is a matter of preference and editorial. Adding "c. Thermal Power <= 5% RTP," to LCO and Bases adds clarity and should be approved. Removing "Mode 2" from Applicability and Bases does not enhance clarity. Except for a few refueling LCOs, all other LCOs refer to a Mode. Prefer "Mode 2" be retained in the Applicability section.

TSTF Review Information

TSTF Received Date: 18-Sep-96 Date Distributed for Review 20-Nov-96

OG Review Completed: ☑ BWOG ☑ WOG ☑ CEOG ☑ BWROG

TSTF Comments:

(No Comments)

TSTF Resolution: Approved Date: 19-Dec-96

NRC Review Information

NRC Received Date: 23-Jan-97 NRC Reviewer: R. Tjader

NRC Comments.

3/13/97 - NRC approves TSTF-14, Rev. 3.
3/18/97 - NRC informed by TSTF that editorial change to TSTF-14, Rev. 3 was needed. Rev. 4 forthcoming.

Final Resolution: NRC Approves Final Resolution Date: 13-Mar-97

TSTF Revision 4 Revision Status: Active Next Action:

Revision Proposed by: TSTF

Revision Description:
Insert 1 to the Bases contained brackets around the Surveillance Frequency even though the Frequency was not backeted in the SR. This revision corrects this by eliminating the brackets in the insert.

TSTF Review Information

TSTF Received Date: 23-Mar-97 Date Distributed for Review 23-Mar-97

OG Review Completed: ☑ BWOG ☑ WOG ☑ CEOG ☑ BWROG

TSTF Comments:

(No Comments)

TSTF Resolution: Approved Date: 23-Mar-97

NRC Review Information

NRC Received Date: 07-Apr-97 NRC Reviewer: R. Tjader

NRC Comments:

3/28/97 - Editorial change to TSTF-14 (Rev. 4) sent to the NRC.
4/14/97 - Reviewer recommended approval.
4/15/97 - To C. Grimes for disposition.
5/2/97 - C. Grimes approved

Final Resolution: NRC Approves Final Resolution Date: 02-May-97

Incorporation Into the NUREGs

File to BBS/LAN Date: TSTF Informed Date: TSTF Approved Date:

NUREG Rev Incorporated:

Affected Technical Specifications

LCO 3.1.10	Physics Test Exceptions - Mode 2	
LCO 3.1.10 Bases	Physics Test Exceptions - Mode 2	
SR 3.1.10.3	Physics Test Exceptions - Mode 2	
	Change Description:	Renumber to 3.1.10.4
SR 3.1.10.3	Physics Test Exceptions - Mode 2	
	Change Description:	Inserted
SR 3.1.10.3 Bases	Physics Test Exceptions - Mode 2	
	Change Description:	Renumber to 3.1.10.4
SR 3.1.10.3 Bases	Physics Test Exceptions - Mode 2	
	Change Description:	Inserted

3.1 REACTIVITY CONTROL SYSTEMS

3.1.10 PHYSICS TESTS Exceptions—MODE 2

LCO 3.1.10 During the performance of PHYSICS TESTS, the requirements of

LCO 3.1.4, "Moderator Temperature Coefficient (MTC)";
LCO 3.1.5, "Rod Group Alignment Limits";
LCO 3.1.6, "Shutdown Bank Insertion Limits";
LCO 3.1.7, "Control Bank Insertion Limits"; and
LCO 3.4.2, "RCS Minimum Temperature for Criticality"

may be suspended, provided:

a. RCS lowest loop average temperature is ≥ [531]°F; ~~and~~

b. SDM is ≥ [1.6]% Δk/k; and

c. THERMAL POWER is ≤ 5% RTP.

APPLICABILITY: MODE 2 during PHYSICS TESTS.

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. SDM not within limit.	A.1	Initiate boration to restore SDM to within limit.	15 minutes
	AND		
	A.2	Suspend PHYSICS TESTS exceptions.	1 hour
B. THERMAL POWER not within limit.	B.1	Open reactor trip breakers.	Immediately

(continued)

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ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. RCS lowest loop average temperature not within limit.	C.1 Restore RCS lowest loop average temperature to within limit.	15 minutes
D. Required Action and associated Completion Time of Condition C not met.	D.1 Be in MODE 3.	15 minutes

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.1.10.1	Perform a CHANNEL OPERATIONAL TEST on power range and intermediate range channels per [SR 3.3.1.7, SR 3.3.1.8, and Table 3.3.1-1].	Within 12 hours prior to initiation of PHYSICS TESTS
SR 3.1.10.2	Verify the RCS lowest loop average temperature is ≥ [531]°F.	30 minutes
SR 3.1.10.~~3~~ 4	Verify SDM is ≥ 1.6% Δk/k.	24 hours
SR 3.1.10.3	Verify THERMAL POWER is ≤ 5% RTP.	30 minutes

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BASES

LCO (continued)

limits is permitted for the purpose of performing PHYSICS TESTS and poses no threat to fuel integrity, provided the SRs are met.

The requirements of LCO 3.1.4, LCO 3.1.5, LCO 3.1.6, LCO 3.1.7, and LCO 3.4.2 may be suspended during the performance of PHYSICS TESTS provided:

a. RCS lowest loop average temperature is ≥ [531] °F; ~~and~~

b. SDM is ≥ [1.6]% Δk/k~~k~~ ; and

c. THERMAL POWER is ≤ 5% RTP.

APPLICABILITY

This LCO is applicable in MODE 2 when performing low power PHYSICS TESTS. The applicable PHYSICS TESTS are performed in MODE 2 at HZP. Other PHYSICS TESTS are performed in MODE 1 and are addressed in LCO 3.1.9, "PHYSICS TESTS Exceptions—MODE 1."

ACTIONS

A.1 and A.2

If the SDM requirement is not met, boration must be initiated promptly. A Completion Time of 15 minutes is adequate for an operator to correctly align and start the required systems and components. The operator should begin boration with the best source available for the plant conditions. Boration will be continued until SDM is within limit.

Suspension of PHYSICS TESTS exceptions requires restoration of each of the applicable LCOs to within specification.

B.1

When THERMAL POWER is > 5% RTP, the only acceptable action is to open the reactor trip breakers (RTBs) to prevent operation of the reactor beyond its design limits. Immediately opening the RTBs will shut down the reactor and prevent operation of the reactor outside of its design limits.

(continued)

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BASES

SURVEILLANCE REQUIREMENTS

SR 3.1.10.2 (continued)

performance of the PHYSICS TESTS will ensure that the initial conditions of the safety analyses are not violated.

INSERT 1 →

SR 3.1.10.~~3~~ 4

The SDM is verified by performing a reactivity balance calculation, considering the following reactivity effects:

a. RCS boron concentration;

b. Control bank position;

c. RCS average temperature;

d. Fuel burnup based on gross thermal energy generation;

e. Xenon concentration;

f. Samarium concentration; and

g. Isothermal temperature coefficient (ITC).

Using the ITC accounts for Doppler reactivity in this calculation because the reactor is subcritical, and the fuel temperature will be changing at the same rate as the RCS.

The Frequency of 24 hours is based on the generally slow change in required boron concentration and on the low probability of an accident occurring without the required SDM.

REFERENCES

1. 10 CFR 50, Appendix B, Section XI.

2. 10 CFR 50.59.

3. Regulatory Guide 1.68, Revision 2, August, 1978.

4. ANSI/ANS-19.6.1-1985, December 13, 1985.

(continued)

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INSERT 1

SR 3.1.8.3 (10)

Verification that the THERMAL POWER is ≤ 5% RTP will ensure that the plant is not operating in a condition that could invalidate the safety analyses. Verification of the THERMAL POWER at a Frequency of 30 minutes during the performance of the PHYSICS TESTS will ensure that the initial conditions of the safety analyses are not violated.

Technical Specification Task Force
Improved Standard Technical Specifications Change Traveler

Correct error in Bases for LCO 3.1.5

NUREGs Affected: ☐ 1430 ☑ 1431 ☐ 1432 ☐ 1433 ☐ 1434

Classification: 4) Change Bases Recommended for CLIIP?: (Unassigned)

Correction or Improvement: (Unassigned)

Industry Contact: Steve Wideman, (620) 364-4037, stwidem@wcnoc.com

Correct error in Bases for LCO 3.1.5.
Correct error in Bases for LCO 3.1.5 caused by incomplete incorporation of Revision 0 change WOG-17, C.1. The Bases now match the Required Actions.

Revision History

OG Revision 0 Revision Status: Closed

Revision Proposed by:

Revision Description:
Original Issue

Owners Group Review Information

Date Originated by OG: 15-Mar-95

Owners Group Comments:
WOG-04, C.7

Owners Group Resolution: Approved Date: 11-Aug-95

TSTF Review Information

TSTF Received Date: 05-Sep-95 Date Distributed for Review: 05-Sep-95

OG Review Completed: ☑ BWOG ☑ WOG ☑ CEOG ☑ BWROG

TSTF Comments:
(No Comments)

TSTF Resolution: Approved Date: 05-Sep-95

NRC Review Information

NRC Received Date: 03-Oct-95

NRC Comments:

6/11/96 - C. Grimes comment: TSTF-15 to be referred to a Tech Br.
9/18/96 - No change in status.
10/30/96 - NRC to propose a change for the TSTF.
12/30/96 - C. Grimes approved, but requested verification; referred back to reviewer.
1/97 - Reviewer verified that change did not need to be referred to a Tech Branch.

Final Resolution: Superceded by Revision Final Resolution Date: 08-Jan-96

TSTF Revision 1 Revision Status: Active

Revision Proposed by: TSTF

Revision Description:
Remarked the pages to use TSTF number instead of OG number.
The Tech Spec markup contains another change not discussed in the Discussion or Justification. The TSTF package was WOG-4, C.7 only, but change WOG-4, C.1 was included in the TSTF package. These were removed.

TSTF Review Information

TSTF Received Date: 08-Jan-96 Date Distributed for Review: 08-Jan-96

OG Review Completed: ☑ BWOG ☑ WOG ☑ CEOG ☑ BWROG

TSTF Comments:

(No Comments)

TSTF Resolution: Approved Date: 08-Jan-96

NRC Review Information

NRC Received Date: 08-Jan-96

NRC Comments:

6/11/96 - C. Grimes comment: TSTF-15 to be referred to a Tech Br.
9/18/96 - No change in status.
10/30/96 - NRC to propose a change for the TSTF.
12/30/96 - C. Grimes approved, but requested verification; referred back to reviewer.
1/97 - Reviewer verified that change did not need to be referred to a Tech Branch.

Final Resolution: NRC Approves Final Resolution Date: 18-Mar-97

Affected Technical Specifications

Action 3.1.5 Bases Rod Group Alignment Limits