Industry/TSTF Standard Technical Specification Change Traveler

Add shutdown CEAs to the SDM Special Test Exception

Priority/Classification 1) Correct Specifications

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

Description:

This change adds the Shutdown CEAs to the SDM Special Test Exception LCO as an exempted LCO.

Justification:

The Shutdown CEA Specification was added to the SDM Special Test Exception to allow CEA worth measurements to be performed on the Shutdown CEAs. Shutdown CEA worth measurements are required if the acceptance criteria for the Regulating CEAs are not met.

Revision History

OG Revision 0 **Revision Status: Active** **Next Action:**

Revision Proposed by: Calvert Cliffs

Revision Description:
Original Issue

Owners Group Review Information

Date Originated by OG: 24-Oct-96

Owners Group Comments
(No Comments)

Owners Group Resolution: Approved Date: 18-Dec-96

TSTF Review Information

TSTF Received Date: 03-Jan-97 Date Distributed for Review 20-Jan-97

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

TSTF Comments:

WOG - Not applicable, accepts
BWOG - Not applicable, accepts
BWROG - Not applicable, accepts

TSTF Resolution: Approved Date: 06-Mar-97

NRC Review Information

NRC Received Date: 27-Mar-97 NRC Reviewer: TJADER, R.

NRC Comments:

4/7/97 Rec'd pkg.
4/10/97 Forwarded to reviewer.
5/1/97 reviewer recommended approval.
5/5/97 to C. Grimes for disposition.
5/6/97 C. Grimes approved changes.

Final Resolution: NRC Approves Final Resolution Date: 06-May-97

Incorporation Into the NUREGs

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

NUREG Rev Incorporated:

Affected Technical Specifications

LCO 3.1.8	STE-SDM (Analog)
LCO 3.1.8 Bases	STE-SDM (Analog)
LCO 3.1.9	STE-SDM (Digital)
LCO 3.1.9 Bases	STE-SDM (Digital)

TSTF-194

3.1 REACTIVITY CONTROL SYSTEMS

3.1.8 Special Test Exception (STE)—SHUTDOWN MARGIN (SDM) (Analog)

LCO 3.1.8 The SDM requirements of LCO 3.1.1, "SHUTDOWN MARGIN (SDM) T_{avg} > 200°F," and the regulating control element assembly (CEA) insertion limits of LCO 3.1.7, "Regulating Control Element Assembly (CEA) Insertion Limits," may be suspended for measurement of CEA worth and the SDM, provided shutdown reactivity equivalent to at least the highest estimated CEA worth (of those CEAs actually withdrawn) is available for trip insertion.

the shutdown control element assembly (CEA) insertion limits of LCO 3.1.6, "shutdown Control Element Assembly (CEA) Insertion Limits,"

APPLICABILITY: MODES 2 and 3 during PHYSICS TESTS.

NOTE

Operation in MODE 3 shall be limited to 6 consecutive hours.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Any CEA not fully inserted and less than the above shutdown reactivity equivalent available for trip insertion. OR All CEAs inserted and the reactor subcritical by less than the above shutdown reactivity equivalent.	A.1 Initiate boration to restore required shutdown reactivity.	15 minutes

BASES

APPLICABLE SAFETY ANALYSES (continued)

peaking factor, T_q and ASI, which represent initial condition input (power peaking) to the accident analysis. Also involved are the shutdown and regulating CEAs, which affect power peaking and are required for shutdown of the reactor. The limits for these variables are specified for each fuel cycle in the COLR.

PHYSICS TESTS meet the criteria for inclusion in the Technical Specifications, since the components and process variable LCOs suspended during PHYSICS TESTS meet Criteria 1, 2, and 3 of the NRC Policy Statement.

LCO

, the shutdown CEA insertion limits of LCO 3.1.6,

This LCO provides that a minimum amount of CEA worth is immediately available for reactivity control when CEA worth measurement tests are performed. The STE is required to permit the periodic verification of the actual versus predicted core reactivity condition occurring as a result of fuel burnup or fuel cycling operations. The SDM requirements of LCO 3.1.1, and the regulating CEA insertion limits of LCO 3.1.7 may be suspended.

APPLICABILITY

This LCO is applicable in MODES 2 and 3. Although CEA worth testing is conducted in MODE 2, sufficient negative reactivity is inserted during the performance of these tests to result in temporary entry into MODE 3. Because the intent is to immediately return to MODE 2 to continue CEA worth measurements, the STE allows limited operation to 6 consecutive hours in MODE 3, as indicated by the Note, without having to borate to meet the SDM requirements of LCO 3.1.1.

ACTIONS

A.1

With any CEA not fully inserted and less than the minimum required reactivity equivalent available for insertion, or with all CEAs inserted and the reactor subcritical by less than the reactivity equivalent of the highest worth CEA, restoration of the minimum SDM requirements must be accomplished by increasing the RCS boron concentration. The required Completion Time of 15 minutes for initiating

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TSTF-194

3.1 REACTIVITY CONTROL SYSTEMS

3.1.9 Special Test Exception (STE)—SHUTDOWN MARGIN (SDM) (Digital)

LCO 3.1.9 The SDM requirements of LCO 3.1.1, "SHUTDOWN MARGIN (SDM)—T_{avg} > 200°F," and the regulating control element assembly (CEA) insertion limits of LCO 3.1.7, "Regulating Control Element Assembly (CEA) Insertion Limits," may be suspended for measurement of CEA worth and SDM, provided shutdown reactivity equivalent to at least the highest estimated CEA worth (of those CEAs actually withdrawn) is available for trip insertion.

the shutdown control element assembly (CEA) insertion limits of LCO 3.1.6, "shutdown Control Element Assembly (CEA) Insertion Limits,"

APPLICABILITY: MODES 2 and 3 during PHYSICS TESTS.

---NOTE---
Operation in MODE 3 shall be limited to 6 consecutive hours.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Any full length CEA not fully inserted and less than the required shutdown reactivity available for trip insertion. OR All full length CEAs inserted and the reactor subcritical by less than the above required shutdown reactivity equivalent.	A.1 Initiate boration to restore required shutdown reactivity.	15 minutes

APPLICABLE SAFETY ANALYSES (continued)

peaking factor, T_q, and ASI, which represent initial condition input (power peaking) to the accident analysis. Also involved are the shutdown and regulating CEAs, which affect power peaking and are required for shutdown of the reactor. The limits for these variables are specified for each fuel cycle in the COLR.

PHYSICS TESTS meet the criteria for inclusion in the Technical Specifications since the components and process variable LCOs suspended during PHYSICS TESTS meet Criteria 1, 2, and 3 of the NRC Policy Statement.

LCO

This LCO provides that a minimum amount of CEA worth is immediately available for reactivity control when CEA worth measurement tests are performed. This STE is required to permit the periodic verification of the actual versus predicted core reactivity condition occurring as a result of fuel burnup or fuel cycling operations. The SDM requirements of LCO 3.1.1 and the regulating CEA insertion limits of LCO 3.1.7 may be suspended.

(this shutdown CEA insertion limits of LCO 3.1.6)

APPLICABILITY

This LCO is applicable in MODES 2 and 3. Although CEA worth testing is conducted in MODE 2, sufficient negative reactivity is inserted during the performance of these tests to result in temporary entry into MODE 3. Because the intent is to immediately return to MODE 2 to continue CEA worth measurements, the STE allows limited operation to 6 consecutive hours in MODE 3 as indicated by the Note, without having to borate to meet the SDM requirements of LCO 3.1.1.

ACTIONS

A.1

With any CEA not fully inserted and less than the minimum required reactivity equivalent available for insertion, or with all CEAs inserted and the reactor subcritical by less than the reactivity equivalent of the highest worth withdrawn CEA, restoration of the minimum SDM requirements must be accomplished by increasing the RCS boron concentration. The required Completion Time of 15 minutes

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