

Industry/TSTF Standard Technical Specification Change Traveler

Revise Accumulator Pressure Reference from Pressurizer to RCS

Priority/Classification 1) Correct Specifications

NUREGs Affected: 1430 1431 1432 1433 1434

Description:

Revises the usage of pressurizer pressure in the accumulator specification to the RCS pressure.

Justification:

In some plants, the pressurizer pressure instrumentation only has a narrow range and cannot read the pressure required by the LCO. However, due to the elevation head of the pressurizer, the pressurizer pressure and the RCS pressure will differ somewhat. While the difference is not significant with respect to this specification, the change will provide consistency with the instrumentation actually used to meet the LCO

Revision History

OG Revision 0

Revision Status: Active

Next Action:

Revision Proposed by: Commanche Peak

Revision Description:
Original Issue

Owners Group Review Information

Date Originated by OG: 01-Jul-96

Owners Group Comments
(No Comments)

Owners Group Resolution: Approved Date: 13-Jun-96

TSTF Review Information

TSTF Received Date: 01-Jul-96 Date Distributed for Review 05-Aug-06

OG Review Completed: BWOG WOG CEOG BWROG

TSTF Comments:

Note: Make change to SR 3.5.1.5 "RCS Pressure" instead of "RCS" when creating TSTF.

CEOG - NA CEOG.

BWOG - NA BWOG

BWROG - NA BWROG

TSTF Resolution: Approved Date: 03-Oct-96

NRC Review Information

NRC Received Date: 22-Jan-97 NRC Reviewer:

NRC Comments:

3/5/97 - Reviewer recommended approval.

3/17/97 - To C. Grimes for disposition.

Final Resolution: NRC Approves

Final Resolution Date: 10-Apr-97

4/2/98

Incorporation Into the NUREGs

File to BBS/LAN Date:

TSTF Informed Date:

TSTF Approved Date:

NUREG Rev Incorporated:

Affected Technical Specifications

Appl. 3.5.1 Accumulators

Action 3.5.1.C Accumulators

SR 3.5.1.5 Accumulators

SR 3.5.1.5 Bases Accumulators

4/2/98

TSTF-117

3.5 EMERGENCY CORE COOLING SYSTEMS (ECCS)

3.5.1 Accumulators

LCO 3.5.1 [Four] ECCS accumulators shall be OPERABLE.

APPLICABILITY: MODES 1 and 2.
MODE 3 with pressurizer RCS pressure > [1000] psig. |

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One accumulator inoperable due to boron concentration not within limits.	A.1 Restore boron concentration to within limits.	72 hours
B. One accumulator inoperable for reasons other than Condition A.	B.1 Restore accumulator to OPERABLE status.	1 hour
C. Required Action and associated Completion Time of Condition A or B not met.	C.1 Be in MODE 3.	6 hours
	AND C.2 Reduce <u>pressurizer</u> <u>RCS</u> pressure to ≤ [1000] psig.	12 hours
D. Two or more accumulators inoperable.	D.1 Enter LCO 3.0.3.	Immediately

TSTF-117

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
SR 3.5.1.5 Verify power is removed from each accumulator isolation valve operator when pressurizer pressurizer RCS is \geq [2000] psig. <i>(Handwritten: RCS pressure)</i>	31 days

BASES

ACTIONS

A.1 (continued)

reduced. The boron in the accumulators contributes to the assumption that the combined ECCS water in the partially recovered core during the early reflooding phase of a large break LOCA is sufficient to keep that portion of the core subcritical. One accumulator below the minimum boron concentration limit, however, will have no effect on available ECCS water and an insignificant effect on core subcriticality during reflood. Boiling of ECCS water in the core during reflood concentrates boron in the saturated liquid that remains in the core. In addition, current analysis techniques demonstrate that the accumulators do not discharge following a large main steam line break for the majority of plants. Even if they do discharge, their impact is minor and not a design limiting event. Thus, 72 hours is allowed to return the boron concentration to within limits.

B.1

If one accumulator is inoperable for a reason other than boron concentration, the accumulator must be returned to OPERABLE status within 1 hour. In this Condition, the required contents of three accumulators cannot be assumed to reach the core during a LOCA. Due to the severity of the consequences should a LOCA occur in these conditions, the 1 hour Completion Time to open the valve, remove power to the valve, or restore the proper water volume or nitrogen cover pressure ensures that prompt action will be taken to return the inoperable accumulator to OPERABLE status. The Completion Time minimizes the potential for exposure of the plant to a LOCA under these conditions.

C.1 and C.2

If the accumulator cannot be returned to OPERABLE status within the associated Completion Time, the plant must be brought to a MODE in which the LCO does not apply. To achieve this status, the plant must be brought to MODE 3 within 6 hours and pressurizer (RCS) pressure reduced to

(continued)

BASES

SURVEILLANCE
REQUIREMENTS
(continued)SR 3.5.1.4

The boron concentration should be verified to be within required limits for each accumulator every 31 days since the static design of the accumulators limits the ways in which the concentration can be changed. The 31 day Frequency is adequate to identify changes that could occur from mechanisms such as stratification or inleakage. Sampling the affected accumulator within 6 hours after a 1% volume increase will identify whether inleakage has caused a reduction in boron concentration to below the required limit. It is not necessary to verify boron concentration if the added water inventory is from the refueling water storage tank (RWST), because the water contained in the RWST is within the accumulator boron concentration requirements. This is consistent with the recommendation of NUREG-1366 (Ref. 5).

SR 3.5.1.5

Verification every 31 days that power is removed from each accumulator isolation valve operator when the pressurizer RCS pressure is ≥ 2000 psig ensures that an active failure could not result in the undetected closure of an accumulator motor operated isolation valve. If this were to occur, only two accumulators would be available for injection given a single failure coincident with a LOCA. Since power is removed under administrative control, the 31 day Frequency will provide adequate assurance that power is removed.

This SR allows power to be supplied to the motor operated isolation valves when pressurizer RCS pressure is < 2000 psig, thus allowing operational flexibility by avoiding unnecessary delays to manipulate the breakers during plant startups or shutdowns. Even with power supplied to the valves, inadvertent closure is prevented by the RCS pressure interlock associated with the valves.

Should closure of a valve occur in spite of the interlock, the SI signal provided to the valves would open a closed valve in the event of a LOCA.

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