

Industry/TSTF Standard Technical Specification Change Traveler

Delete reference to PORV setpoint operating correctly

Priority/Classification 4) Change Bases

NUREGs Affected: 1430 1431 1432 1433 1434

Description:

The reference to the PORV setpoint operating correctly is being deleted from the Bases.

Justification:

This change deletes an incorrect reference to the PORV setpoints. The statement is being deleted because the PORV setpoint does not operate; if the PORVs are operating correctly, they will relieve within their required setpoint.

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: 17-Jan-96

Owners Group Comments
(No Comments)

Owners Group Resolution: Approved Date: 24-Jan-96

TSTF Review Information

TSTF Received Date: 05-Mar-96 Date Distributed for Review 07-Mar-96

OG Review Completed: BWO WOG CEOG BWROG

TSTF Comments:

NA WOG
Applicable to BWO

TSTF Resolution: Approved Date: 16-Apr-96

NRC Review Information

NRC Received Date: 12-Jun-96 NRC Reviewer: M. Weston

NRC Comments:
9/18/96 - Approved.

Final Resolution: NRC Approves Final Resolution Date: 18-Sep-96

Incorporation Into the NUREGs

File to BBS/LAN Date: TSTF Informed Date: 11-Mar-97 TSTF Approved Date:

NUREG Rev Incorporated:

4/2/98

Affected Technical Specifications

Bkgnd 3.4.11 Bases Pressurizer PORVs

BASES

BACKGROUND
(continued)

Placing the setpoint below the pressurizer safety valve opening setpoint reduces the frequency of challenges to the safety valves, which, unlike the PORV, cannot be isolated if they were to fail open. The PORV setpoint is therefore important for limiting the possibility of a small break LOCA.

The primary purpose of this LCO is to ensure that the PORV ~~its setpoint~~ and the block valve are operating correctly so the potential for a small break LOCA through the PORV pathway is minimized, or if a small break LOCA were to occur through a failed open PORV, the block valve could be manually operated to isolate the path.

The PORV may be manually operated to depressurize the RCS as deemed necessary by the operator in response to normal or abnormal transients. The PORV may be used for depressurization when the pressurizer spray is not available; a condition that would be encountered during loss of offsite power. Steam generator tube rupture (SGTR) is one event that may require use of the PORV if the sprays are unavailable.

The PORV may also be used for feed and bleed core cooling in the case of multiple equipment failure events that are not within the design basis, such as a total loss of feedwater.

The PORV functions as an automatic overpressure device and limits challenges to the safety valves. Although the PORV acts as an overpressure device for operational purposes, safety analyses [do not take credit for PORV actuation, but] do take credit for the safety valves.

The PORV also provides low temperature overpressure protection (LTOP) during heatup and cooldown. LCO 3.4.12, "Low Temperature Overpressure Protection (LTOP) System," addresses this function.

APPLICABLE
SAFETY ANALYSES

The PORV small break LOCA break size is bounded by the spectrum of piping breaks analyzed for plant licensing. Because the PORV small break LOCA is located at the top of the pressurizer, the RCS response characteristics are different from RCS loop piping breaks; analyses have been performed to investigate these characteristics.

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TSTF-56

B 3.4 REACTOR COOLANT SYSTEM (RCS)

B 3.4.11 Pressurizer Power Operated Relief Valves (PORVs)

BASES

BACKGROUND

The pressurizer is equipped with two types of devices for pressure relief: pressurizer safety valves and PORVs. The PORV is an air operated valve that is automatically opened at a specific set pressure when the pressurizer pressure increases and is automatically closed on decreasing pressure. The PORV may also be manually operated using controls installed in the control room.

An electric, motor operated, normally open, block valve is installed between the pressurizer and the PORV. The function of the block valve is to isolate the PORV. Block valve closure is accomplished manually using controls in the control room and may be used to isolate a leaking PORV to permit continued power operation. Most importantly, the block valve is used to isolate a stuck open PORV to isolate the resulting small break loss of coolant accident (LOCA). Closure terminates the RCS depressurization and coolant inventory loss.

The PORV and its block valve controls are powered from normal power supplies. Their controls are also capable of being powered from emergency supplies. Power supplies for the PORV are separate from those for the block valve. Power supply requirements are defined in NUREG-0737, Paragraph III, G.1 (Ref. 1).

The PORV setpoint is above the high pressure reactor trip setpoint and below the opening setpoint for the pressurizer safety valves as required by Reference 2. The purpose of the relationship of these setpoints is to limit the number of transient pressure increase challenges that might open the PORV, which, if opened, could fail in the open position. The PORV setpoint thus limits the frequency of challenges from transients and limits the possibility of a small break LOCA from a failed open PORV. Placing the setpoint below the pressurizer safety valve opening setpoint reduces the frequency of challenges to the safety valves, which, unlike the PORV, cannot be isolated if they were to fail to open.

The primary purpose of this LCO is to ensure that the PORV ~~its setpoint~~ and the block valve are operating correctly so

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