Technical Specification Task Force
Improved Standard Technical Specifications Change Traveler

Make RHR - Low Water Level Surveillances consistent between PWR NUREGs

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

Classification: 1) Correct Specifications Recommended for CLIIP?: (Unassigned)

Correction or Improvement: (Unassigned)

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A change is made to the RHR/SDC - Low Water Level Surveillances to allow both RHR pumps to be aligned to the RWST to fill the refueling cavity or to perform the RHR full flow test.

This change is necessary as the LCO requires both RHR loops to be OPERABLE and OPERABLE is described in the Bases as a flow path from the RCS hot leg, through the RHR pump and RHR heat exchanger, to the RCS cold leg. However, in order to fill the refueling cavity in preparation for refueling, the suction of the RHR pumps is aligned to the RWST and the water is pumped into the refuling cavity through the RCS hot legs. A similar sitaution occurs during the RHR full flow test when both pumps are aligned to the RWST and pump water into the core. This change to the Bases acknowledges these conditions.

Revision History

OG Revision 0 Revision Status: Active

Revision Proposed by: Ginna

Revision Description:
Original Issue

Owners Group Review Information

Date Originated by OG: 14-Nov-95

Owners Group Comments:
(No Comments)

Owners Group Resolution: Approved Date: 14-Nov-95

TSTF Review Information

TSTF Received Date: 02-Nov-95 Date Distributed for Review: 02-Nov-95

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

TSTF Comments:
(No Comments)

TSTF Resolution: Approved Date: 14-Nov-95

NRC Review Information

NRC Received Date: 16-Nov-95

OG Revision 0 Revision Status: Active

NRC Comments: Date of NRC Letter: 27-Sep-96

2/20/96 - reviewer approved change.
3/4/96 - package to C. Grimes to review
6/11/96 - C. Grimes comment: TSTF-21 is probably OK. TSB needs to write down why it is OK.
9/16/96 - Simple design clarification in Bases that must confirm to licensing basis.
9/16/96 - Approved.

Final Resolution: NRC Approves Final Resolution Date: 16-Sep-96

TSTF Revision 1 Revision Status: Closed

Revision Proposed by: WOG

Revision Description:
NUREG-1431, SR 3.9.6.1 is revised to be consistent with the other PWR Surveillances. NUREG-1431, SR 3.9.6.1 states, "Verify one RHR loop is in operation and circulating reactor coolant at a flow rate of >= [2800] gpm." NUREG-1430, SR 3.6.5.1 states, "Verify one DHR loop is in operation." NUREG-1432, SR 3.6.5.1 states, "Verify required SDC loops are OPERABLE and one SDC loop is in operation." (Note that the flow rate requirement appears in all three NUREGs in the DHR/RHR/SDC - High Water Level SRs.) The NUREG-1431 and NUREG-1432 SRs are revised to match the NUREG-1430 SR. This change is necessary to allow the RHR flow requirement to not be met when the RHR is aligned to the Refueling Water Storage Tank (RWST).

The RHR is aligned to the RWST for filling and draining of the reactor cavity and for testing as described in the Justification section of this change. When aligned to the RWST, the RHR does not "circulate" reactor coolant as described in the SR and the flow rate may not be at the flow rate given in the SR. However, the function of the RHR, i.e.; removing decay heat, is still being performed and the system should be considered Operable. In addition to the NUREG-1431 SR change, the Bases for the Surveillance in the PWR NUREGs is modified to explicitly state that the system is OPERABLE when aligned to the RWST. Without this change, the LCO would be considered not met due to SR 3.0.1 when the RHR is aligned to the RWST, and Condition A would be entered. One Required Action directs that action be taken to restore the RHR immediately, effectively blocking the use of the RHR to fill and drain the reactor cavity.

A Bases change was also made to NUREG-1432 to eliminate the phrase, "and circulating reactor coolant" for consistency with the other PWR NUREGs.

As an editorial change, the missing header for SR 3.9.6.2 was added to the NUREG-1431 Bases.

Owners Group Review Information

Date Originated by OG: 04-May-97

Owners Group Comments:
(No Comments)

Owners Group Resolution: Approved Date: 04-May-97

TSTF Review Information

TSTF Received Date: 04-May-97 Date Distributed for Review: 06-Jan-98

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

TSTF Comments:

TSTF Revision 1 Revision Status: Closed

(No Comments)

TSTF Resolution: Approved Date: 05-Feb-98

NRC Review Information

NRC Received Date: 20-Feb-98

NRC Comments: Date of NRC Letter: 29-Apr-99

9/24/98 - NRC stated that they had approved.

4/28/99 - NRC changed disposition. The disposition of TSTF-021, R. 1 is changed to "rejected." TSTF-022 requested that brackets be placed around the flow rate contained in the surveillance. This was rejected based on the staff position that those specifications that currently contain a flow rate should retain them. Subsequently, following rejection of TSTF-022, TSTF-021, R. 1 was revised to delete the flow rate contained in the surveillance even though it had been rejected in TSTF-22. Therefore, the disposition of this revision (TSTF-021, R. 1) should have been to modify the TSTF to reject the deletion of the flow rate in the surveillance. This change is consistent with NRC disposition of TSTF-022. The licensees should retain their licensing basis. We understand the difficulty in meeting the flowrate when the RHR is aligned to the RWST. To address this problem, we propose adding notes to those specifications containing flow rates as indicated in the attached information. See 4/29/99 letter from NRC to NEI.
3/6/01 - WOG accepts rejection. 4/5/01 - CEOG accepts rejection.

4/29/2001 - TSTF accepts rejection. Note that Rev. 0 is still approved.

Final Resolution: NRC Rejects: TSTF Accepts Final Resolution Date: 29-Apr-01

Affected Technical Specifications

LCO 3.9.5 Bases	DHR and Coolant Circulation - Low Water Level	NUREG(s)- 1430 Only
LCO 3.9.6 Bases	RHR and Coolant Circulation - Low Water Level	NUREG(s)- 1431 Only
LCO 3.9.5 Bases	SDC and Coolant Circulation - Low Water Level	NUREG(s)- 1432 Only

INSERT 1

Both DHR pumps may be aligned to the Refueling Water Storage Tank to support filling or draining the refueling cavity or for performance of required testing.

INSERT 2

Both RHR pumps may be aligned to the Refueling Water Storage Tank to support filling or draining the refueling cavity or for performance of required testing.

INSERT 3

Both SDC pumps may be aligned to the Refueling Water Storage Tank to support filling or draining the refueling cavity or for performance of required testing.

TSTF-21

BASES

APPLICABLE SAFETY ANALYSES (continued)

reduction. Therefore, the DHR System is retained as a Specification.

LCO

In MODE 6, with the water level < 23 ft above the top of the reactor vessel flange, two DHR loops must be OPERABLE. Additionally, one DHR loop must be in operation to provide:

a. Removal of decay heat;

b. Mixing of borated coolant to minimize the possibility of criticality; and

c. Indication of reactor coolant temperature.

An OPERABLE DHR loop consists of a DHR pump, a heat exchanger, valves, piping, instruments, and controls to ensure an OPERABLE flow path and to determine the low end temperature. The flow path starts in one of the RCS hot legs and is returned to the RCS cold legs.

Insert 1

APPLICABILITY

Two DHR loops are required to be OPERABLE, and one in operation in MODE 6, with the water level < 23 ft above the top of the reactor vessel flange, to provide decay heat removal. Requirements for the DHR System in other MODES are covered by LCOs in Section 3.4, Reactor Coolant System (RCS), and Section 3.5, Emergency Core Cooling Systems (ECCS). DHR loop requirements in MODE 6, with the water level ≥ 23 ft above the top of the reactor vessel flange, are located in LCO 3.9.4, "Decay Heat Removal (DHR) and Coolant Circulation—High Water Level."

ACTIONS

A.1 and A.2

With fewer than the required loops OPERABLE, action shall be immediately initiated and continued until the DHR loop is restored to OPERABLE status or until ≥ 23 ft of water level is established above the reactor vessel flange. When the water level is established at ≥ 23 ft above the reactor

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TSTF-21

BASES

LCO (continued)

Additionally, one loop of RHR must be in operation in order to provide:

a. Removal of decay heat;

b. Mixing of borated coolant to minimize the possibility of criticality; and

c. Indication of reactor coolant temperature.

An OPERABLE RHR loop consists of an RHR pump, a heat exchanger, valves, piping, instruments and controls to ensure an OPERABLE flow path and to determine the low end temperature. The flow path starts in one of the RCS hot legs and is returned to the RCS cold legs.

Insert 2

APPLICABILITY

Two RHR loops are required to be OPERABLE, and one RHR loop must be in operation in MODE 6, with the water level < 23 ft above the top of the reactor vessel flange, to provide decay heat removal. Requirements for the RHR System in other MODES are covered by LCOs in Section 3.4, Reactor Coolant System (RCS), and Section 3.5, Emergency Core Cooling Systems (ECCS). RHR loop requirements in MODE 6 with the water level ≥ 23 ft are located in LCO 3.9.5, "Residual Heat Removal (RHR) and Coolant Circulation—High Water Level."

ACTIONS

A.1 and A.2

If less than the required number of RHR loops are OPERABLE, action shall be immediately initiated and continued until the RHR loop is restored to OPERABLE status and to operation or until ≥ 23 ft of water level is established above the reactor vessel flange. When the water level is ≥ 23 ft above the reactor vessel flange, the Applicability changes to that of LCO 3.9.5, and only one RHR loop is required to be OPERABLE and in operation. An immediate Completion Time is necessary for an operator to initiate corrective actions.

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TSTF-21

BASES (continued)

LCO

In MODE 6, with the water level < 23 ft above the top of the reactor vessel flange, both SDC loops must be OPERABLE. Additionally, one loop of the SDC System must be in operation in order to provide:

a. Removal of decay heat;

b. Mixing of borated coolant to minimize the possibility of a criticality; and

c. Indication of reactor coolant temperature.

An OPERABLE SDC loop consists of an SDC pump, a heat exchanger, valves, piping, instruments, and controls to ensure an OPERABLE flow path and to determine the low end temperature. The flow path starts in one of the RCS hot legs and is returned to the RCS cold legs.

Insert 3 →

APPLICABILITY

Two SDC loops are required to be OPERABLE, and one SDC loop must be in operation in MODE 6, with the water level < 23 ft above the top of the reactor vessel flange, to provide decay heat removal. Requirements for the SDC System in other MODES are covered by LCOs in Section 3.4, Reactor Coolant System. MODE 6 requirements, with a water level ≥ 23 ft above the reactor vessel flange, are covered in LCO 3.9.4, "Shutdown Cooling and Coolant Circulation—High Water Level."

ACTIONS

A.1 and A.2

If one SDC loop is inoperable, action shall be immediately initiated and continued until the SDC loop is restored to OPERABLE status and to operation, or until ≥ 23 ft of water level is established above the reactor vessel flange. When the water level is established at ≥ 23 ft above the reactor vessel flange, the Applicability will change to that of LCO 3.9.4, "Shutdown Cooling and Coolant Circulation—High Water Level," and only one SDC loop is required to be OPERABLE and in operation. An immediate Completion Time is necessary for an operator to initiate corrective actions.

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