Industry/TSTF Standard Technical Specification Change Traveler

Remove Bases Reference to Hydrotest Requirement to Gag SRVs

Classification: 2) Bases Only Change

Priority: 4)Edit/Bases

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

Description:
Revise LCO Bases to remove a statement that the ASME inservice test requires the safety relief valves to be gagged.

Justification:
Background

The Bases to LCO 3.10.1 state that the ASME inservice test requires the safety / relief vales to be gagged, preventing their OPERABILITY.

Need for Change

In May, 1999, the NRC approved Code Case N-498-1 which allows the specified testing to be performed without gagging the safety / relief valves. Thus, the Bases are no longer accurate.

Proposed Change

The proposed change replaces the LCO Bases statement that the ASME code requires the safety / relief valves to be gagged with a statement, "performance of inservice leak and hydrostatic testing would also necessitate the inoperability of some subsystems normally required to be operable when > 200 F."

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Justification

Section XI, titled "Rules for Inservice Inspection of Nuclear Power Plant Components," of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code, Article IWA-5000, titled "System Pressure Tests," specifies in IWA-5211(d), titled "Test Description," that a system hydrostatic test shall be conducted during a plant shutdown at a pressure above the nominal operating pressure or system pressure for which overpressure protection is provided. Article IWA-5000 also specifies in IWA-5212(a), titled "Pressure and Temperature," that hydrostatic tests shall be conducted at test conditions specified in IWB-5000, titled "System Pressure Tests."

Article IWA-5000 specifies in IWB-5222, titled "System Hydrostatic Test," that the system hydrostatic test may be conducted at any test pressure specified in Table IWB-5222-1, titled "System Hydrostatic Test." The test pressures stipulated on this Table specify hydrostatic test pressures which are a small increase over the nominal operating design pressure.

The hydrostatic test pressures specified in Table IWB-5222-1 are typically in close proximity to the overpressure protection setpoints associated with the safety and/or relief valves. Accordingly, gaging or removal of safety and/or relief valves was necessary to prevent simmering of these valves. Simmering could adversely affected the ability of these valves to perform: 1) their overpressure protection function and/or 2) to provide an adequate leak tight barrier during normal operating conditions.

Code Case N-498-1, titled "Alternative Rules for 10-Year Hydrostatic Testing for Class 1, 2, and 3 Systems, Section XI, Division 1," allows a visual examination at nominal operating pressure and temperature in conjunction with a system leakage test in lieu of a 10-year hydrostatic pressure test at or near the end of the 10-year interval. This Code Case eliminates the necessity to gag or remove Code safety and/or relief valves which places the system, and thus the plant, in an off-normal state.

Code Case N-498-1 was approved for general use by reference in Regulatory Guide 1.147, Rev. 12, May 1999, titled "Inservice Inspection Code Case Acceptability ASME Section XI, Division 1."

The Section XI hydrostatic pressure test is primarily regarded as a means to enhance leak detection during examination of components under pressure, rather than as a method to determine the structural integrity of the components. In addition, the industry experience indicates that leaks are not being discovered as a result of hydrostatic test pressures causing a pre-existing flaw to propagate through the wall. In most cases leaks are being found when the system is at normal operating pressure.

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Revision History

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

Revision Proposed by: BWROG

Revision Description:
Original Issue

Owners Group Review Information

Date Originated by OG: 08-Nov-00

Owners Group Comments
(No Comments)

Owners Group Resolution: Approved Date: 08-Nov-00

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

TSTF Review Information

TSTF Received Date: 08-Nov-00 Date Distributed for Review 06-Apr-01

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

TSTF Comments:
(No Comments)

TSTF Resolution: Approved Date: 02-May-01

NRC Review Information

NRC Received Date: 24-May-01

NRC Comments:
(No Comments)

Final Resolution: NRC Action Pending Final Resolution Date:

Incorporation Into the NUREGs

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

NUREG Rev Incorporated:

Affected Technical Specifications

LCO 3.10.1 Bases Inservice Leak and Hydrostatic Testing Operation

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performance of inservice leak and hydrostatic testing would also necessitate the inoperability of some subsystems normally required to be OPERABLE when > 200 °F.

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BASES

APPLICABLE SAFETY ANALYSES (continued)

in coolant activity above the LCO 3.4.7, "RCS Specific Activity," limits are minimized. In addition, the secondary containment will be OPERABLE, in accordance with this Special Operations LCO, and will be capable of handling any airborne radioactivity or steam leaks that could occur during the performance of hydrostatic or leak testing. The required pressure testing conditions provide adequate assurance that the consequences of a steam leak will be conservatively bounded by the consequences of the postulated main steam line break outside of primary containment described in Reference 2. Therefore, these requirements will conservatively limit radiation releases to the environment.

In the event of a large primary system leak, the reactor vessel would rapidly depressurize, allowing the low pressure core cooling systems to operate. The capability of the low pressure coolant injection and core spray subsystems, as required in MODE 4 by LCO 3.5.2, "ECCS - Shutdown," would be more than adequate to keep the core flooded under this low decay heat load condition. Small system leaks would be detected by leakage inspections before significant inventory loss occurred.

For the purposes of this test, the protection provided by normally required MODE 4 applicable LCOs, in addition to the secondary containment requirements required to be met by this Special Operations LCO, will ensure acceptable consequences during normal hydrostatic test conditions and during postulated accident conditions.

As described in LCO 3.0.7, compliance with Special Operations LCOs is optional, and therefore, no criteria of 10 CFR 50.36(c)(2)(ii) apply. Special Operations LCOs provide flexibility to perform certain operations by appropriately modifying requirements of other LCOs. A discussion of the criteria satisfied for the other LCOs is provided in their respective Bases.

LCO

As described in LCO 3.0.7, compliance with this Special Operations LCO is optional. Operation at reactor coolant temperatures > 200°F can be in accordance with Table 1.1-1 for MODE 3 operation without meeting this Special Operations LCO or its ACTIONS. This option may be required due to P/T limits, however, which require testing at temperatures > 200°F, while the ASME inservice test itself requires the safety/relief valves to be gagged, preventing their OPERABILITY.

Insert

If it is desired to perform these tests while complying with this Special Operations LCO, then the MODE 4 applicable LCOs and specified

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BASES

APPLICABLE SAFETY ANALYSES (continued)

increase in coolant activity above the limits of LCO 3.4.8, "Reactor Coolant System (RCS) Specific Activity," are minimized. In addition, the secondary containment will be OPERABLE, in accordance with this Special Operations LCO, and will be capable of handling any airborne radioactivity or steam leaks that could occur during the performance of hydrostatic or leak testing. The required pressure testing conditions provide adequate assurance that the consequences of a steam leak will be conservatively bounded by the consequences of the postulated main steam line break outside of primary containment described in Reference 2. Therefore, these requirements will conservatively limit radiation releases to the environment.

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