Westinghouse

FAX COVER SHEET

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COMMENTS:

TOM

LET'S TRY AGAIN.

JIM

Question 410.290

Section 9.2.10.5 of the SSAR (Revision 3) states that instruments are provided for monitoring system parameters. Essential system parameters are monitored in the main control room via information taken from the hot water heating system through the plant data display and processing system. What are the essential system parameters related to the hot water heating system. The instruments for the heat exchanger and pumps were initially designed locally on the piping system. Do these instruments provide indication in the control room for the hot water heating system after the design change?

Response:

SSAR subsection 9.2.10, Revision 6, states that the hot water heating system serves no safety-related function and therefore has no nuclear safety design basis. The information provided in the subsection is sufficient for review of the system's potential for impact on the safety of the plant. The subsection also states that instruments are provided for monitoring system parameters and that essential system parameters are monitored in the main control room. The current design of the integrated data display and control systems have instruments in the hot water heating system on the ~~data highway~~ Monitor Bus. This allows for any of the system instruments to be monitored or displayed in the control room. Local display is also provided as requested by the roving operator on his portable display device. Normal operating display of system parametric data will be developed as part of the man-machine interface, human factors engineering process described in Chapter 18 of the SSAR.

SSAR Revision: NONE

~~Data Bus~~ Monitor Bus

PRELIMINARY

3.7 PLANT SYSTEMS

3.7.7 Startup Feedwater Isolation and Control Valves

LCO 3.7.7 Both Startup Feedwater Isolation Valves and Control Valves shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Only one valve OPERABLE in a single flow path.	A.1 Restore both a control and an isolation valve in each flow path to OPERABLE status. OR A.2 Isolate the flow path.	72 hours 72 hours
B. Two valves in the same flow path inoperable.	B.1 Enter LCO 3.0.3	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.7.1	Verify both startup feedwater isolation and control valves are OPERABLE.	~~31 days~~ In accordance with the Inservice Testing Program

PRELIMINARY

PRELIMINARY

B 3.7 PLANT SYSTEMS

B 3.7.7 Startup Feedwater Isolation and Control Valves

BASES

BACKGROUND

The startup feedwater system supplies feedwater to the steam generators during plant startup, hot standby and cooldown, and in the event of main feedwater unavailability.

The startup feedwater system serves no safety-related function and has no safety-related design basis, except to isolate feedwater in the event of a feedwater or steam line break inside containment.

The subsystem consists of two series startup feedwater valves ~~motor driven pumps, each taking suction from the deaerator and discharging into the main feedwater piping. An alternate suction feed is provided from the condensate tank. The combined capacity of both pumps is equivalent to 7% of the normal feedwater flow. Each startup feedwater line contains a control valve and an isolation valve.~~ which bypass the main feedwater line and provide feedwater control for low feedwater demand conditions. Feedwater can be supplied to the startup feedwater line via either the main or startup feedwater pumps. The feedwater is delivered directly to the SG independent of the main feedwater line. Each startup feedwater line contains one control valve and one isolation valve.

APPLICABLE SAFETY ANALYSES

The basis for the requirement to isolate the startup feedwater system is established by the analysis for large Steam Line Break (SLB) inside containment. It is also influenced by the analysis for a large Feedline Break (FLB)

update for tube rupture also

Failure to isolate the startup feedwater system following a SLB or FLB can lead to additional mass and energy being delivered to the steam generators, resulting in excessive cooldown and additional mass and energy release in containment.

T-cold--Low or high steam level signals closes the startup feedwater control and isolation valves and trips the startup feedwater pumps.

The startup feedwater isolation and control valves are components which actuate to mitigate a Design Basis Accident, and as such meet Criterion 3 of the NRC Policy Statement.

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PRELIMINARY

PRELIMINARY

BASES (continued)

LCO

This LCO ensures that the startup feedwater isolation and control valves will actuate on command, following a SLB or FLB, and isolate startup feedwater flow to the steam generators.

The startup feedwater isolation and control valves are considered OPERABLE when they close on an isolation actuation signal, and their isolation times are within the required limits.

APPLICABILITY

The startup feedwater isolation and control valves must be OPERABLE whenever there is significant mass and energy in the Reactor Coolant System and the steam generators. This ensures that, in the event of a high energy line break, a single failure will not result in the blowdown of more than one steam generator. In MODES 1, 2, and 3, the startup feedwater isolation and control valves are required to be OPERABLE in order to limit the amount of mass and energy that could be added to containment in the event of a SLB or FLB. When the valves are closed, they are already performing their safety function.

In MODES 4, 5, and 6, the energy in the steam generators are low, and isolation of the startup feedwater system is not required.

ACTIONS

A.1 and A.2

With only one valve (isolation or control) OPERABLE in a single flow path, there is no redundant capability to isolate the flow path. In this case, both an isolation and a control valve in each flow path must be restored to OPERABLE status with 72 hours, or the flow path must be isolated. A Completion Time of 72 hours is acceptable since, with one valve in a flow path inoperable, there is a second valve available in the flow path to isolate the line.

If both the isolation and control valves in a single flow path cannot be restored to OPERABLE status in the required Completion time, then the flow path must be isolated by closing the OPERABLE valve.

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PRELIMINARY