

MSIV LEAKAGE CONTROL SYSTEMLIMITING CONDITION FOR OPERATION

3.6.1.4 Two independent MSIV leakage control system (LCS) subsystems shall be OPERABLE.

APPLICABILITY: OPERATIONAL CONDITIONS 1*, 2*, and 3*.

ACTION:

With one MSIV leakage control system subsystem inoperable, restore the inoperable subsystem to OPERABLE status within 30 days or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

SURVEILLANCE REQUIREMENTS

4.6.1.4 Each MSIV leakage control system subsystem shall be demonstrated OPERABLE:

- a. At least once per 31 days by verifying:
 1. Blower OPERABILITY by starting the blower(s) from the control room and operating the blower(s) for at least 15 minutes.
 2. Inboard heater OPERABILITY by demonstrating electrical continuity of the heating element circuitry by verifying the inboard heater draws $8.28 \pm 10\%$ amperes per phase.
- b. During each COLD SHUTDOWN, if not performed within the previous 92 days, by cycling each motor operated valve, including the main steam stop valves, through at least one complete cycle of full travel.
- c. At least once per 18 months by:
 1. Performance of a functional test which includes simulated actuation of the subsystem throughout its operating sequence, and verifying that each automatic valve actuates to its correct position, and the blower(s) start(s).
 2. Verifying that the blower(s) develop(s) at least the below required vacuum at the rated capacity:
 - a) Inboard system, 15" H₂O at ≥ 100 scfm.
 - b) Outboard system, 15" H₂O at ≥ 200 scfm.
- d. By verifying the inboard flow and inboard and outboard pressure instrumentation to be OPERABLE by performance of a:
 1. CHANNEL FUNCTIONAL TEST at least once per 31 days, and
 2. CHANNEL CALIBRATION at least once per 18 months.

*The provisions of Specification 3.0.4 are not applicable from the effective date of this amendment until the completion of Operating Cycle 8.

This
Amendment
Request

SIGNIFICANT HAZARDS CONSIDERATION

The standards used to arrive at a determination that a request for amendment involves no significant hazards considerations are included in the Commission's Regulations, 10 CFR 50.92, which state that the operation of the facility in accordance with the proposed amendment would not (1) involve a significant increase in the probability or consequences of an accident previously evaluated, (2) create the possibility of a new or different kind of accident from any previously evaluated, or (3) involve a significant reduction in a margin of safety.

The proposed amendment has been reviewed with respect to these three factors and it has been determined that the proposed change does not involve a significant hazard because:

1. The proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

This License Amendment application proposes an extension for one operating cycle of the exception to Limiting Condition for Operation (LCO) 3.0.4 as it applies to the Technical Specification for the MSIV Leakage Control System. This extension is proposed for the duration of the sixth cycle of PNPP operation, to permit completion of activities necessary to implement the most appropriate permanent resolution for the issue of secondary containment bypass leakage through the Main Steam Line drains. During the sixth cycle, the drains will remain in their current configuration, which seals off the bypass leakage path. The sealed drain path results in a temporary inoperability of the Inboard MSIV Leakage Control System (MSIV-LCS) subsystem when the plant is operated below 50% power, due to condensate build-up in the bottom of the steam lines between the MSIVs. The requested 3.0.4 exception is necessary to permit plant startups with this temporary inoperability, for the duration of the sixth operating cycle.

The probability of occurrence of a previously evaluated accident is not affected by the proposed extension of the LCO 3.0.4 exception since no change to the plant or to the manner in which the plant is operated is involved. The existing plant configuration will be maintained for another operating cycle, and possible concerns resulting from that configuration have been analyzed. The extra weight of the water pooled between the MSIVs was analyzed with respect to piping supports and seismic considerations and was found to be acceptable, and any condensate that is carried past the outboard MSIVs will be drained to the condenser by drain connections downstream of the outboard MSIVs before it can reach the turbine. The temporary inoperability of the Inboard MSIV-LCS when below 50% power has no impact on accident initiation probability, since LCS does not serve to prevent accidents, but is only used in mitigating the consequences of Loss of Coolant Accidents that have already occurred.

The consequences of an accident are not significantly increased in that the Outboard MSIV-LCS will be available to perform the MSIV-LCS function by mitigating the consequences of a Loss of Coolant Accident during the temporary period in which the Inboard MSIV-LCS is unavailable. Any condensate that is carried past the outboard MSIVs will be drained to the condenser by drain connections downstream of the outboard MSIVs; therefore no impairment of the Outboard MSIV-LCS will result from condensed water.

The Action statement for one inoperable LCS subsystem remains the same, and limits plant operation to the previously established 30-day Allowable Outage Time. The Action required if both subsystems of MSIV-LCS were to become inoperable also remains the same. The MSIV function of isolating the Main Steam Lines is also unaffected by the existing plant configuration, since MSIV performance will not be affected by the existence of accumulated water in the bottom of the steam lines between the MSIVs during plant operation below 50% power. Therefore, if necessary, the Main Steam Lines will be isolated, and leakage past the MSIVs will be routed for filtration as in the design-basis radiological analyses, and the consequences of previously evaluated accidents will remain unaffected.

2. The proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

The proposed change to permit inoperability of the Inboard MSIV-LCS during periods of startup and power ascension to 50% RTP and during shutdown below 50% RTP does not create the possibility of a new or different kind of accident from any previously evaluated. The Inboard MSIV-LCS is only credited during a Recirculation Line Break LOCA wherein Reactor Coolant System depressurization occurs. The temporary unavailability of the Inboard MSIV-LCS can be mitigated by operation of the Outboard MSIV-LCS. The amendment to the Technical Specifications is an administrative change that does not involve any change to the current plant design or methods of operation. No new plant equipment failure modes or accident initiators are introduced by the extension of the LCO 3.0.4 exception.

3. The proposed change does not involve a significant reduction in a margin of safety.

The response to the Recirculation Line Break LOCA will not be significantly affected since the Outboard MSIV-LCS can be assumed to be available. Allowing entry into Operational Conditions 1, 2 and 3 while utilizing the existing Action statement does not significantly reduce the margin of safety since the duration of time allowed for remaining in that Action statement is not increased. The proposed change will have no adverse impact on the reactor coolant system pressure boundary nor will any other system protective boundary or safety limit be affected.

CONTAINMENT SYSTEMS

BASES

3/4.6.1.3 CONTAINMENT AIR LOCKS (Continued)

The administrative controls for both sentences of footnote ** include provisions that after each entry and exit, the OPERABLE door must be promptly closed. The allowances of footnote ** are acceptable because of the low probability of an event that could pressurize the containment during the short time that the OPERABLE door will be open for entry into and exit from the containment.

The air supply to the containment air lock and seal system is the service and instrument air system. The system consists of two 100% capacity air compressors per unit and can be cross-connected. This system is redundant and extremely reliable and provides system pressure indication in the control room.

3/4.6.1.4 MSIV LEAKAGE CONTROL SYSTEM

Calculated doses resulting from the maximum leakage allowance for the main steam line isolation valves in the postulated LOCA situations would be a small fraction of the 10 CFR 100 guidelines, provided the main steam line system from the isolation valves up to and including the turbine condenser remains intact. Operating experience has indicated that degradation has occasionally occurred in the leak tightness of the MSIV's such that the specified leakage requirements have not always been maintained continuously. The requirement for the leakage control system will reduce the untreated leakage from the MSIV's when isolation of the primary system and containment is required. An LCO 3.0.4 exception is provided to permit changes in operational conditions when the Inboard MSIV-LCS subsystem becomes inoperable due to condensate buildup between the MSIVs when the plant is operated below 50% rated thermal power.

3/4.6.1.5 CONTAINMENT STRUCTURAL INTEGRITY

This limitation ensures that the structural integrity of the containment will be maintained comparable to the original design standards for the life of the unit. Structural integrity is required to ensure that the containment will withstand the maximum pressure of 15 psig in the event of a LOCA. A visual inspection in conjunction with Type A leakage tests is sufficient to demonstrate this capability.

3/4.6.1.5 CONTAINMENT INTERNAL PRESSURE

The limitations on primary containment to secondary containment differential pressure ensure that the primary containment peak pressure of 7.80 psig does not exceed the design pressure of 15.0 psig during LOCA conditions or that the external pressure differential does not exceed the design maximum external pressure differential of +0.8 psid. The limit of -0.1 to +1.0 psid for initial positive primary containment to secondary containment pressure will limit the primary containment pressure to 7.80 psig which is less than the design pressure and is consistent with the safety analysis.

3.6 CONTAINMENT SYSTEMS

3.6.1.9 Main Steam Isolation Valve (MSIV) Leakage Control System (LCS)

LCO 3.6.1.9 Two MSIV LCS subsystems shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One MSIV LCS subsystem inoperable.	NOTE LCO 3.0.4 is not applicable A.1 Restore MSIV LCS subsystem to OPERABLE status.	30 days
	B.1 Restore one MSIV LCS subsystem to OPERABLE status.	7 days
C. Required Action and associated Completion Time not met.	C.1 Be in MODE 3.	12 hours
	AND C.2 Be in MODE 4.	36 hours

until the completion of Operating Cycle 6.

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.6.1.9.1 Operate each MSIV LCS blower \geq 15 minutes.	31 days

(continued)

BASES

APPLICABLE SAFETY ANALYSES (continued)

The MSIV LCS satisfies Criterion 3 of the NRC Policy Statement.

LCO

One MSIV LCS subsystem can provide the required processing of the MSIV leakage. To ensure that this capability is available, assuming worst case single failure, two MSIV LCS subsystems must be OPERABLE.

APPLICABILITY

In MODES 1, 2, and 3, a DBA could lead to a fission product release to primary containment. Therefore, MSIV LCS OPERABILITY is required during these MODES. In MODES 4 and 5, the probability and consequences of these events are reduced due to the pressure and temperature limitations in these MODES. Therefore, maintaining the MSIV LCS OPERABLE is not required in MODE 4 or 5 to ensure MSIV leakage is processed.

ACTIONS

A.1

With one MSIV LCS subsystem inoperable, the inoperable MSIV LCS subsystem must be restored to OPERABLE status within 30 days. In this Condition, the remaining OPERABLE MSIV LCS subsystem is adequate to perform the required leakage control function. However, the overall reliability is reduced because a single failure in the remaining subsystem could result in a total loss of MSIV leakage control function. The 30 day Completion Time is based on the redundant capability afforded by the remaining OPERABLE MSIV LCS subsystem and the low probability of a DBA LOCA occurring during this period. An LCO 3.0.4 exception is provided to permit changes in Operational Conditions when the Inboard MSIV-LCS subsystem becomes inoperable due to condensate B.1 buildup between the MSIVs when the plant is operated below 50% rated thermal power.

With two MSIV LCS subsystems inoperable, at least one subsystem must be restored to OPERABLE status within 7 days. The 7 day Completion Time is based on the low probability of the occurrence of a DBA LOCA.

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