Industry/TSTF Standard Technical Specification Change Traveler

Correction of Rod Position Indication Condition

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

Classification 3) Editorial Change Recommended for CLIIP?: No

Priority 4)Edit/Bases

Simple or Complex Change: Simple

Industry Contact: Wideman, Steve (316) 364-4037 stwidem@wcnoc.com

1.0 Description

NUREG-1431, LCO 3.1.7, Condition D, is revised from "One demand position indicator per bank inoperable for one or more banks" to "One or more demand position indicators inoperable." The Bases are revised to reflect the change to the Condition.

2.0 Proposed Change

This change proposes to revise the wording of 3.1.7, Condition D to state, "One or more demand position indicators inoperable."

3.0 Background

NUREG-1431, LCO 3.1.7, Rod Position Indication, is modified by an ACTIONS Note which states, "Separate Condition entry is allowed for each inoperable rod position indicator and each demand position indicator." The Bases for the Note state that the Note is acceptable because the Required Actions for each Condition provide appropriate compensatory actions for each inoperable indicator.

LCO 3.1.7, Condition D, states "One demand position indicator per bank inoperable for one or more banks." There are two demand position indicators per bank of rods.

The separate condition entry Note modifying the 3.1.7 ACTIONS clearly states that separate condition entry is allowed for inoperable demand position indicators. However, the Condition D wording is inconsistent with the separate condition entry Note and could easily lead to the misapplication of the Technical Specifications. The Note states that separate condition entry may be made for each inoperable demand position indicator but the Condition appears to limit entry into Condition D to one demand position indicator per bank.

4.0 Technical Analysis

A change to Condition D of LCO 3.1.7 is proposed to make the Condition wording consistent with the separate condition entry Note modifying the Actions. This change does not alter the intent of Condition D, but eliminates a potential misinterpretation that could lead to an unnecessary plant shutdown.

The Required Actions to LCO 3.1.7, Condition D, provide appropriate compensatory measures for an inoperable demand position indicator. ACTION D requires administrative verification that the [D]RPIs for the affected banks are OPERABLE, thus providing indication of the rod position. ACTION D also requires periodic verification that the most and least withdrawn rods in the affected bank are within 12 steps apart. If these Actions cannot be performed, power is reduced to £ 50% RTP.

Without the proposed clarification, and despite the separate condition entry Note, it could be construed that Condition D cannot be entered for two demand position indicators in the same bank inoperable. Under this misinterpretation, two inoperable demand position indicators in the same bank would lead to an LCO 3.0.3 entry. This is inappropriate and is not what is intended under the separate condition entry Note. The Required Actions provided in ACTION D are equally applicable to two inoperable demand position indicators in a bank as to two inoperable demand position indicators in separate banks. Also, the ITS allows indefinite operation if all of the [D]RPIs in a bank are inoperable. It would be completely inconsistent to interpret the ITS as requiring a plant shutdown for two demand position indicators in a bank inoperable, especially considering the fact that the [D]RPIs measure actual rod position while the demand position indicators only measure the requested rod position.

As currently stated, the wording of Condition D is inconsistent with the expected application of the separate condition entry Note and its misinterpretation could lead to an unnecessary plant shutdown. Therefore, the wording of the Condition is revised to be consistent with the application of the ACTIONS Note and the other Required Actions in LCO 3.1.7.

5.0 Regulatory Analysis

5.1 No Significant Hazards Consideration

Changes to the ITS Bases do not require a Determination of No Significant Hazards Consideration.

5.2 Applicable Regulatory Requirements/Criteria

This change does not affect any regulatory requirements or criteria.

6.0 Environmental Consideration

A review has determined that the proposed change would change a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or would change an inspection or surveillance requirement. However, the proposed change does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluent that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed change meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed change.

7.0 References

None

Revision History

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

Revision Proposed by: Surry Power Station

Revision Description:
Original Issue

Owners Group Review Information

Date Originated by OG: 18-Jul-01

Owners Group Comments
(No Comments)

Owners Group Resolution: Approved Date: 18-Jul-01

TSTF Review Information

TSTF Received Date: 01-Nov-01 Date Distributed for Review 18-Jan-02

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

TSTF Comments:
WOG Only

TSTF Resolution: Approved Date: 05-Feb-02

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

NRC Review Information

NRC Received Date: 04-Mar-02

Affected Technical Specifications

Action 3.1.7.D	Rod Position Indication
Action 3.1.7.D Bases	Rod Position Indication

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ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
	B.3 Verify the position of the rods with inoperable position indicators indirectely by using the movable incore detectors. AND	Once per 8 hours
	B.4 Restore inoperable position indicators to OPERABLE status such that a miximum of one [D]RPI per group is inoperable.	24 hours
C. One or more rods with inoperable position indicators have been moved in excess of 24 steps in one direction since the last determination of the rod's position.	C.1 Verify the position of the rods with inoperable position indicators indirectly by using movable incore detectors. OR	[4] hours
	C.2 Reduce THERMAL POWER to ≤ 50% RTP.	8 hours
D. One demand position indicator ~~per bank~~ inoperable ~~for one or more banks.~~ (5) or more	D.1.1 Verify by administrative means all [D]RPIs for the affected banks are OPERABLE. AND	Once per 8 hours
	D.1.2 Verify the most withdrawn rod and the least withdrawn rod of the affected banks are ≤ 12 steps apart. OR	Once per 8 hours

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BASES

ACTIONS (continued)

Monitoring and recording reactor coolant T_{avg} help assure that significant changes in power distribution and SDM are avoided. The once per hour Completion Time is acceptable because only minor fluctuations in RCS temperature are expected at steady state plant operating conditions.

The position of the rods may be determined indirectly by use of the movable incore detectors. The Required Action may also be satisfied by ensuring at least once per 8 hours that F_Q satisfies LCO 3.2.1, $F^N_{\Delta H}$ satisfies LCO 3.2.2, and SHUTDOWN MARGIN is within the limits provided in the COLR, provided the nonindicating rods have not been moved. Verification of control rod position once per 8 hours is adequate for allowing continued full power operation for a limited, 24 hour period, since the probability of simultaneously having a rod significantly out of position and an event sensitive to that rod position is small. The 24 hour Completion Time provides sufficient time to troubleshoot and restore the [D]RPI system to operation while avoiding the plant challenges associated with the shutdown without full rod position indication.

Based on operating experience, normal power operation does not require excessive rod movement. If one or more rods has been significantly moved, the Required Action of C.1 and C.2 below is required.

C.1 and C.2

These Required Actions clarify that when one or more rods with inoperable position indicators have been moved in excess of 24 steps in one direction, since the position was last determined, the Required Actions of A.1 and A.2, or B.1, as applicable are still appropriate but must be initiated promptly under Required Action C.1 to begin verifying that these rods are still properly positioned, relative to their group positions.

If, within [4] hours, the rod positions have not been determined, THERMAL POWER must be reduced to $\leq$ 50% RTP within 8 hours to avoid undesirable power distributions that could result from continued operation at > 50% RTP, if one or more rods are misaligned by more than 24 steps. The allowed Completion Time of [4] hours provides an acceptable period of time to verify the rod positions.

D.1.1 and D.1.2 or more

With one demand position indicator ~~per bank~~ inoperable, the rod positions can be determined by the [D]RPI System. Since normal power operation does not require excessive movement of rods, verification by