Industry/TSTF Standard Technical Specification Change Traveler

Revise Actions for inoperable, misaligned APSR

Priority/Classification 1) Correct Specifications

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

Description:

Delete Required Actions A.1 and A.2 of NUREG-1430, LCO 3.1.6 and replace them with new Required Action A.1 to "Perform SR 3.2.3.1" - the AXIAL POWER IMBALANCE SR, within "2 hours AND 2 hours after APSR movement."

Justification:

NUREG-1430, LCO 3.1.6 Required Action A.1 is essentially a "restore" type actions which is always an option that need not be specifically listed. The Bases retain the explanation that this method of restoration is an option for clarify. Required Action A.2 is omitted because it prevents restoration of the misaligned rod to within alignment after the 2 hour Completion Time is completed. The Bases indicate that Required Action A.2 is provided to prevent any increase in the misalignment which may then cause the AXIAL POWER IMBALANCE limits to be exceeded. However, because this Required Action also prevents movement of the APSR which may result in restoration, an alternative is proposed to perform the AXIAL POWER IMBALANCE SR within 2 hours and again within 2 hours following any APSR movement. This would also identify exceeded AXIAL POWER IMBALANCE limits, and provide indication of the effect of any movement whether the AXIAL POWER IMBALANCE limits are exceeded or not.

Revision History

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

Revision Proposed by: Oconee

Revision Description:
Original Issue

Owners Group Review Information

Date Originated by OG: 06-Nov-97

Owners Group Comments
ONS-017

Owners Group Resolution: Approved Date: 06-Nov-97

TSTF Review Information

TSTF Received Date: 06-Nov-97 Date Distributed for Review 15-Dec-97

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

TSTF Comments:

Add "each" to Completion Time of A and revise the Bases. BWOG only.

TSTF Resolution: Approved Date: 05-Feb-98

NRC Review Information

NRC Received Date: 10-Mar-98 NRC Reviewer:

NRC Comments:

(No Comments)

Final Resolution: NRC Approves Final Resolution Date: 10-Apr-98

Incorporation Into the NUREGs

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

NUREG Rev Incorporated:

Affected Technical Specifications

Action 3.1.6.A	APSR Alignment Limits
Action 3.1.6.A Bases	APSR Alignment Limits

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3.1 REACTIVITY CONTROL SYSTEMS

3.1.6 AXIAL POWER SHAPING ROD (APSR) Alignment Limits

LCO 3.1.6 Each APSR shall be OPERABLE and aligned within [6.5]% of its group average height.

APPLICABILITY: MODES 1 and 2, when the APSRs are not fully withdrawn.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One APSR inoperable, not aligned within its limits, or both.	Perform SR 3.2.3.1.	
	A.1 ~~Align the APSR group to within [6.5]% of the inoperable or misaligned rod, while maintaining the APSR insertion limits in the COLR.~~	2 hours
	AND	AND
	A.2 ~~Prevent movement of the APSR group, while the rod remains inoperable or misaligned.~~	2 hours after each APSR movement
		~~2 hours~~
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3.	6 hours

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BASES

LCO (continued)

value is established based on the distance between reed switches, with additional allowances for uncertainty in the absolute position indicator amplifiers, group maximum or minimum synthesizer, and asymmetric alarm or fault detector outputs. The position of an inoperable rod is not included in the calculation of the rod group's average position.

Failure to meet the requirements of this LCO may produce unacceptable power peaking factors, and LHRs, which may constitute initial conditions inconsistent with the safety analysis.

APPLICABILITY

The requirements on APSR OPERABILITY and alignment are applicable in MODES 1 and 2, when the APSRs are not fully withdrawn because these are the only MODES in which neutron (or fission) power is generated, and the OPERABILITY and alignment of rods have the potential to affect the safety of the plant. OPERABILITY and alignment of the APSRs are not required when they are fully withdrawn because they do not influence core power peaking. In MODES 3, 4, 5, and 6, the alignment limits do not apply because the reactor is shut down and not producing fission power, and excessive local LHRs cannot occur from APSR misalignment.

ACTIONS

A.1

The ACTIONS described below are required if one APSR is inoperable. The plant is not allowed to operate with more than one inoperable APSR. This would require the reactor to be shut down, in accordance with LCO 3.0.3.

~~A.1 and A.2~~

An alternate to realigning a single misaligned APSR to the group average position is to align the remainder of the APSR group to the position of the misaligned or inoperable APSR, while maintaining APSR insertion, in accordance with the limits in the COLR. This restores the alignment requirements. Deviations up to 2 hours will not cause significant xenon redistribution to occur. ~~Required~~ This alternative ~~Action A.2~~ assumes the APSR group movement does not cause the limits of LCO 3.2.2. "AXIAL POWER SHAPING ROD (APSR) Insertion Limits," to be exceeded. For this reason,

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BASES

ACTIONS

A.1 ~~and A.2~~ (continued)

APSR group movement

~~Required Action A.1~~ is only practical for instances where small movements of the APSR group are sufficient to re-establish APSR alignment.

The reactor may continue in operation with the APSR misaligned if ~~further movement of the APSR group is prohibited, so that the misalignment does not increase and cause~~ the limits on AXIAL POWER IMBALANCE ~~to be exceeded.~~ The required Completion Time of up to 2 hours will not cause significant xenon redistribution to occur.

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B.1

The plant must be brought to a MODE in which the LCO does not apply if the Required Actions and associated Completion Times cannot be met. To achieve this status, the plant must be brought to at least MODE 3 within 6 hours. The Completion Time of 6 hours is reasonable, based on operating experience, for reaching MODE 3 from RTP in an orderly manner and without challenging plant systems. In MODE 3, APSR group alignment limits are not required because the reactor is not generating THERMAL POWER and excessive local LHRs cannot occur from APSR misalignment.

SURVEILLANCE REQUIREMENTS

SR 3.1.6.1

Verification at a 12 hour Frequency that individual APSR positions are within [6.5]% of the group average height limits allows the operator to detect an APSR beginning to deviate from its expected position. If the asymmetric CONTROL ROD alarm is inoperable, a 4 hour Frequency is reasonable to prevent large deviations in APSR alignment from occurring without detection. In addition, APSR position is continuously available to the operator in the control room so that during actual rod motion, deviations can immediately be detected.

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are surveilled within 2 hours to determine if the AXIAL POWER IMBALANCE is still within limits. Also, since any additional movement of the APSRs may result in additional imbalance, Required Action A.1 also requires the AXIAL POWER IMBALANCE surveillance to be performed again within 2 hours after each APSR movement.