



License Amendment Request - Adoption of TSTF-107-A
Separate Control Rods that are Untrippable versus Inoperable
and Change to TS 3.1.5 Condition B

Pre-Submittal Meeting
October 27, 2022



Agenda

- Introductions
- Overview of TSTF-107-A
- Technical Specification (TS) 3.1.5 Variation
- Proposed TS Changes
- Submittal Timeline



Overview of TSTF-107-A

- TSTF-107-A revises TS 3.1.5 LCO Statement, Conditions A, C and D to correct ambiguity regarding control rods that are inoperable vs. out of alignment
 - ❑ The LCO statement is revised to clarify that the alignment limit is separate from the operability of the rod
 - ❑ Conditions A and D - removes 'trippable and' so misaligned CEAs require entry into Condition A and D and completion of their respective REQUIRED ACTION
 - ❑ Condition C - replaces 'untrippable' with 'inoperable' to address trippable, but slow CEAs that are inoperable
 - ❑ Specific CEA misalignment values and completion times are not changed
 - ❑ Condition D plant trip Action not changed
 - ❑ Conforming TS Bases Changes consistent with TSTF-107-A



Overview of TSTF-107-A

- Changes are similar to the approved Combustion Engineering (CE) Standard Technical Specifications (STS) (NUREG-1432, Revision 5)
 - The approved CE STS have similar Actions but are designated as Conditions A and B
- Current PVNGS TS 3.1.5 based upon CE STS (NUREG-1432) Revision 1 (LA 117, ADAMS Accession No. ML021720060), which predated TSTF-107-A
 - PVNGS TS 3.1.5 Conditions B and D are different than the CE STS and TSTF-107-A
 - Condition B addresses CEA position indication
 - Condition D directs opening of the reactor trip breakers if two or more CEAs are misaligned by more than the specified limit (Plant trip action not in TSTF-107-A)



TS 3.1.5 Variation

- Revises TS 3.1.5, Condition B – provides action for limited duration loss of some position indication for multiple CEAs
- Condition B artifact of Old TS, not TSTF-107 or CE-STS
- With LCO 3.1.5 not met, and no Action provided, LCO 3.0.3 requires placement of unit outside mode of applicability (Modes 1 and 2)
- Change to TS 3.1.5, Condition B improves readability for Operators



TS 3.1.5 Variation

TS Bases for 3.1.5, Condition B

“At least two of the following three CEA position indicator channels shall be OPERABLE for each CEA:

- a. CEA Reed Switch Position Transmitter (RSPT 1) with the capability of determining the absolute CEA positions within 5.2 inches,
- b. CEA Reed Switch Position Transmitter (RSPT 2) with the capability of determining the absolute CEA positions within 5.2 inches, and
- c. The CEA pulse counting position indicator channel.” ...

“Additionally, the Upper Electrical Limit (UEL) CEA reed switches provide an acceptable indication of CEA position for a fully withdrawn condition.”



TS 3.1.5 Variation

- Unlikely but credible single failure could result in more than one CEA per group having only one OPERABLE position indicator channel - loss of a vital instrument bus (PNC-D27 or PND-D28)
- Each CEA still has at least one OPERABLE position indicator channel to confirm the required LCO initial conditions
 - New Advanced Rod Control Hybrid (ARCH) / Ovation modification is designed such that CEA pulse counts are retained, therefore having two OPERABLE position indicator channels.
- 6-hour completion time to restore the CEA indicator channel preferable to LCO 3.0.3 entry with potential CEA movement during shutdown



Proposed TS Changes

CEA Alignment
3.1.5

3.1 REACTIVITY CONTROL SYSTEMS

3.1.5 Control Element Assembly (CEA) Alignment

LCO 3.1.5 All full strength CEAs shall be OPERABLE, ~~and all full strength and part strength CEAs shall be aligned to within 6.6 inches (indicated position) of all other CEAs in their respective groups.~~

AND

All full strength and part strength CEAs shall be aligned to within 6.6 inches (indicated position) of all other CEAs in their respective groups

APPLICABILITY: MODES 1 and 2.



Proposed TS Changes

ACTIONS		
CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more CEAs trippable and misaligned from its group by > 6.6 inches and \leq 9.9 inches. <u>OR</u> One CEA trippable and misaligned from its group by > 9.9 inches.	A.1 Reduce THERMAL POWER in accordance with the limits in the COLR.	1 hour
	<u>AND</u> A.2 Restore CEA alignment.	2 hours

(continued)



Proposed TS Changes

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. Only one CEA position indicator channel OPERABLE for one CEA per CEA <u>Group or more CEAs.</u>	B.1 Restore at least two position indicator channels to OPERABLE status.	6 hours
	<u>OR</u> B.2 Verify the CEA Group(s) with the inoperable position indicators are fully withdrawn or fully inserted while maintaining the insertion limits of LCO 3.1.6, LCO 3.1.7 and LCO 3.1.8.	6 hours <u>AND</u> Once per 12 hours thereafter.



Proposed TS Changes

C. Required Action and associated Completion Time of Condition A or B not met <u>OR</u> One or more full strength CEAs untripable <u>inoperable</u> .	C.1 Be in MODE 3.	6 hours
D. Two or more CEAs trippable and misaligned from their group by > 9.9 inches.	D.1 Open the reactor trip breakers.	Immediately



Submittal Timeline

- Target submittal in November 2022
- Requesting one year review and approval
- 90-day implementation following approval



Questions