Nuclear Operating Company

NRC pre-submittal meeting for proposed South Texas Project Moderator Temperature Coefficient Tech Spec change

STP Licensing / PWROG

September 14, 2020

Agenda

- Introductions / opening remarks
- Meeting objective
- Background
- Need for the change
- Proposed change
- Summary and conclusions
- Submittal schedule
- Open discussion

Introductions / opening remarks

- STP / PWROG
- NRC

Meeting objective

- Discuss a proposed change to STP Technical Specification 3/4.1.1.3, “Moderator Temperature Coefficient” [Westinghouse STS 3.1.3]

Background

- The Technical Specifications (TS) typically do not specify how a Surveillance should be performed, only that a parameter should be within limits
- The specific details of how the Surveillance should be performed are not contained in STP Surveillance Requirements (SR) 3.1.3.1 and SR 3.1.3.2 in NUREG-1431, Rev. 4, “Standard Technical Specifications Westinghouse Plants,” for the Moderator Temperature Coefficient Tech Spec (STS 3.1.3)
- SR 3.1.3.1 in NUREG-1431 states:
  “Verify MTC is within upper limit”
- SR 3.1.3.2 in NUREG-1431 states:
  “Verify MTC is within lower limit”

Background (continued)

- How the Surveillance is performed is implemented via Surveillance Test Procedures
- Changes to Surveillance Test Procedures are made in accordance with 10 CFR 50.59
- WCAP-13749-P-A, “Safety Evaluation Supporting the Conditional Exemption of the Most Negative EOL Moderator Temperature Coefficient Measurement,” is not approved to determine the EOL MTC that is assumed in the safety analyses
- WCAP-13749-P-A is a procedure that is used to verify that the EOL MTC is within the limit assumed in the safety analyses, in lieu of measuring the EOL MTC, and should not be included in the STP COLR Specification (TS 6.9.1.6.b. Item 10)
- STP is the PWROG Lead Plant for the proposed Tech Spec change; other PWROG members will reference the STP License Amendment as precedent in their LARs

Need for the change

- Current SRs 4.1.1.3 a. and b., contain the word “measured,” which precludes using another procedure to verify that the Surveillances are met
- WCAP-13749-P-A is a procedure that is used to verify that the EOL MTC is within the limit assumed in the safety analyses, in lieu of measuring the EOL MTC, and should not be included in the COLR Specification (6.9.1.6.b.)
- Revising the wording in SRs 4.1.1.3 a. and b. from “measured” to “verified” will allow the use of other procedures to verify that the Surveillances are met
- Deleting WCAP-13749-P-A from the COLR Specification (6.9.1.6.b.) will allow the use of another procedure to verify that the EOL MTC limit is met

Proposed change

4.1.1.3 The MTC shall be determined to be within its limits during each fuel cycle as follows:

a. The MTC shall be verified ~~measured~~ and compared to the BOL limit specified in the COLR prior to initial operation above 5% of RATED THERMAL POWER, after each fuel loading; and

b. The MTC shall be verified ~~measured~~ at any THERMAL POWER and compared to the 300 ppm surveillance limit specified in the COLR (all rods withdrawn, RATED THERMAL POWER condition) within 7 EFPD after reaching an equilibrium boron concentration of 300 ppm.* In the event this comparison indicates the MTC is more negative than the 300 ppm surveillance limit specified in the COLR, the MTC shall be reverified ~~remeasured~~, and compared to the EOL MTC limit specified in the COLR, at least once per 14 EFPD during the remainder of the fuel cycle.

~~* Measurement of the MTC in accordance with Surveillance Requirement 4.1.1.3.b may be suspended, provided that the benchmark criteria in WCAP-13749-P-A (refer to 6.9.1.6.b.10) and the Revised Prediction specified in the COLR are satisfied.~~

Proposed change (continued)

6.9.1.6.b.

10. Not used ~~WCAP-13749-P-A, "Safety Evaluation Supporting the Conditional Exemption of the Most Negative EOL Moderator Temperature Coefficient Measurement," March 1997, (W Proprietary).~~

Submittal schedule

- 09/14/2020 - NRC pre-submittal meeting
- 10/10/2020 - Discuss NRC meeting feedback with PWROG
- 12/03/2020 - STP submits LAR
- As required - RAI process
- NRC acceptance + 12 months - NRC approves LAR

* all dates are tentative

Open discussion