



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

September 10, 2021

Mr. G. T. Powell
President and Chief Executive Officer
STP Nuclear Operating Company
P.O. Box 289
Wadsworth, TX 77483

SUBJECT: SOUTH TEXAS PROJECT, UNITS 1 AND 2 - REGULATORY AUDIT
SUMMARY REGARDING LICENSE AMENDMENT REQUEST TO REVISE
MODERATOR TEMPERATURE COEFFICIENT SURVEILLANCE
REQUIREMENTS (EPID-L-2021-LLA-0004)

Dear Mr. Powell:

By letter dated January 13, 2021 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML21014A213), STP Nuclear Operating Company (the licensee) submitted a license amendment request for South Texas Project, Units 1 and 2. The proposed amendment would modify Surveillance Requirements 4.1.1.3.a and 4.1.1.3.b. and Technical Specification 6.9.1.6.b. This change is being proposed to revise the moderator temperature coefficient surveillance requirements to allow the use of a calculated value instead of a measurement to verify the moderator temperature coefficient limits are met.

To support its review, the U.S. Nuclear Regulatory Commission (NRC) staff conducted a regulatory audit via the use of an online reference portal set up by the licensee, and a webinar. The NRC staff reviewed documents and held discussions with the licensee's staff concerning the license amendment request. The audit summary is enclosed.

If you have any questions, please contact me at 301-415-6256 or via e-mail at Dennis.Galvin@nrc.gov.

Sincerely,

/RA/

Dennis J. Galvin, Project Manager
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-498 and 50-499

Enclosure:
Audit Summary

cc: Listserv

REGULATORY AUDIT SUMMARY
LICENSE AMENDMENT REQUEST TO REVISE
MODERATOR TEMPERATURE COEFFICIENT SURVEILLANCE REQUIREMENTS
STP NUCLEAR OPERATING COMPANY
SOUTH TEXAS PROJECT, UNITS 1 AND 2
DOCKETS 50-498 AND 50-499

1.0 BACKGROUND

By letter dated January 13, 2021 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML21014A213), STP Nuclear Operating Company (the licensee) submitted a license amendment request (LAR) regarding South Texas Project Units 1 and 2. The proposed amendment would modify Surveillance Requirements 4.1.1.3.a and 4.1.13.b. and Technical Specification (TS) 6.9.1.6.b. This change is being proposed to revise the beginning of life moderator temperature coefficient (MTC) surveillance requirements to allow the use of a calculated value instead of a measurement to verify the MTC limits are met. The proposed change would also remove the requirement to meet the benchmark criteria of WCAP-13749-P-A when verifying the end of life MTC using a calculated value. The calculated value used to verify the MTC limits are met would be determined using an U.S. Nuclear Regulatory Commission (NRC)-approved neutronics analysis model.

The NRC staff reviewed the licensee's submittal and determined that a regulatory audit would support its review of the proposed license amendment. The audit was conducted in accordance with the audit plan dated February 26, 2021 (ADAMS Accession No. ML21058A000).

2.0 AUDIT ACTIVITIES AND OBSERVATIONS

The purpose of the audit was to (1) understand details of the licensee's proposed approach for verifying the MTC, (2) discuss the appropriate licensing basis based on potential limitations of the proposed approach, (3) identify additional information that is necessary for the licensee to supplement its application for the NRC staff to reach a licensing or regulatory decision, and (4) establish an understanding of the supporting documentation to allow the NRC staff to issue clear requests for additional information and for the licensee to be able to provide quality and timely responses.

The audit was conducted via the use of an online reference portal set up by the licensee and webinars. Through the online reference portal, the NRC staff reviewed an unsubmitted Pressurized Water Reactor Owner's Group (PWROG) report, PWROG-19014-P, "Verification Versus Measurement of the Beginning of Cycle Life and End of Cycle Life Moderator Temperature Coefficient," that described the approach for determining the beginning of life and end of life MTC using a calculated value. The NRC staff also reviewed the licensee's response to the audit questions contained in Appendix A to the audit plan.

The NRC staff and the licensee conducted webinars on May 10 and June 3, 2021. During the May 10, 2021, webinar, the NRC staff and the licensee discussed the PWROG report and the

response to the audit questions. The NRC staff identified significant concerns with the approach in the PWROG report and the corresponding level of detail in the LAR. The NRC staff and the licensee discussed the types of information that could be used to augment the PWROG report and LAR, and the licensee indicated that it would consider the NRC staff feedback.

During the June 3, 2021, webinar, the licensee indicated that it had issues with submitting the type of information that was discussed in the May 10, 2021, webinar. The licensee discussed alternative qualitative justifications to support the proposed MTC surveillance requirement changes, including discussing how other TS surveillances could be used as surrogate measures to provide assurance that the MTC is within the TS limit. The NRC staff indicated that these alternative justifications are not described in the LAR, and that it was not clear what type of information was proposed to be submitted to support the LAR. The licensee indicated that it would clarify information to be included in a potential LAR supplement in a future interaction. The NRC staff determined that further interaction on this topic was appropriate for a public meeting, and a public meeting was held on July 26, 2021. A summary of the public meeting dated August 12, 2021, is available in ADAMS at Accession No. ML21222A119. The NRC staff notes that the several issues identified in the meeting summary are also applicable to the audit.

3.0 RESULTS OF THE AUDIT

The audit identified issues with the proposed TS changes and identified topics to be discussed in a public meeting.

4.0 AUDIT PARTICIPANTS

U.S. Nuclear Regulatory Commission

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REQUIREMENTS (EPID-L-2021-LLA-0004) DATED SEPTEMBER 10, 2021

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ADAMS Accession No. ML21236A308

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