

November 26, 2002

Mr. William T. Cottle
President and Chief Executive Officer
STP Nuclear Operating Company
South Texas Project Electric
Generating Station
P. O. Box 289
Wadsworth, TX 77483

SUBJECT: SOUTH TEXAS PROJECT, UNITS 1 AND 2 - ISSUANCE OF AMENDMENTS
APPROVING TECHNICAL SPECIFICATION CHANGES REVISING THE END
OF LIFE MODERATOR TEMPERATURE COEFFICIENT SURVEILLANCE
REQUIREMENTS (TAC NOS. MB5160 and MB5161)

Dear Mr. Cottle:

The Commission has issued the enclosed Amendment No. 144 to Facility Operating License No. NPF-76 and Amendment No. 132 to Facility Operating License No. NPF-80 for the South Texas Project, Units 1 and 2, respectively. The amendments consist of changes to the Technical Specifications (TSs) in response to your application dated May 23, 2002, as supplemented by letter dated October 31, 2002.

The supplemental letter dated October 31, 2002, provided additional information of clarifying nature, which did not expand the scope of the application as originally noticed; and did not change the Nuclear Regulatory Commission staff's original proposed no significant hazards consideration determination as published in the *Federal Register* (67 FR 45572).

The amendments revise the TSs for the end of life moderator temperature coefficient surveillance requirements.

A copy of our related Safety Evaluation is enclosed. The Notice of Issuance will be included in the Commission's next biweekly *Federal Register* notice.

Sincerely,

/RA/

Mohan C. Thadani, Senior Project Manager, Section 1
Project Directorate IV
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-498 and 50-499

Enclosures: 1. Amendment No. 144 to NPF-76
2. Amendment No. 132 to NPF-80
3. Safety Evaluation

cc w/encls: See next page

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*no substantive changes in se dated 11/07/02

OFFICE	PDIV-1/ SrPM	PDIV-1/LA	SRXB/BC*	OGC	PDIV-1/SC
NAME	MThadani:sab	MMcAllister	JWermiel	STurk	RGramm
DATE	11/20/2002	11/20/2002	11/07/02	11/25/2002	11/26/2002

OFFICIAL RECORD COPY

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STP NUCLEAR OPERATING COMPANY

DOCKET NO. 50-498

SOUTH TEXAS PROJECT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 144
License No. NPF-76

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by STP Nuclear Operating Company* acting on behalf of itself and for Texas Genco, LP, the City Public Service Board of San Antonio (CPS), Central Power and Light Company (CPL), and the City of Austin, Texas (COA) (the licensees), dated May 23, 2002, as supplemented by letter dated October 31, 2002, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in Chapter 1 of Title 10 of the *Code of Federal Regulations* (10 CFR);
 - B. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this license amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

*STP Nuclear Operating Company is authorized to act for Texas Genco, LP, the City Public Service Board of San Antonio, Central Power and Light Company, and the City of Austin, Texas, and has exclusive responsibility and control over the physical construction, operation, and maintenance of the facility.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and Paragraph 2.C.(2) of Facility Operating License No. NPF-76 is hereby amended to read as follows:

- (2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 144 , and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the license. The STP Nuclear Operating Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. The license amendment is effective as of its date of issuance and shall be implemented within 30 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Robert A. Gramm, Chief, Section 1
Project Directorate IV
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: November 26, 2002

STP NUCLEAR OPERATING COMPANY

DOCKET NO. 50-499

SOUTH TEXAS PROJECT, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 132
License No. NPF-80

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by STP Nuclear Operating Company* acting on behalf of itself and for Texas Genco, LP, the City Public Service Board of San Antonio (CPS), Central Power and Light Company (CPL), and the City of Austin, Texas (COA) (the licensees), dated May 23, 2002, as supplemented by letter dated October 31, 2002, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in Chapter 1 to Title 10 of the *Code Of Federal Regulations* (10 CFR);
 - B. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this license amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

*STP Nuclear Operating Company is authorized to act for Texas Genco, LP, the City Public Service Board of San Antonio, Central Power and Light Company, and the City of Austin, Texas, and has exclusive responsibility and control over the physical construction, operation, and maintenance of the facility.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and Paragraph 2.C.(2) of Facility Operating License No. NPF-80 is hereby amended to read as follows:

- (2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 132 , and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the license. The STP Nuclear Operating Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. The license amendment is effective as of its date of issuance and shall be implemented within 30 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Robert A. Gramm, Chief, Section 1
Project Directorate IV
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: November 26, 2002

ATTACHMENT TO LICENSE AMENDMENT NOS. 144 AND 132

FACILITY OPERATING LICENSE NOS. NPF-76 AND NPF-80

DOCKET NOS. 50-498 AND 50-499

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

REMOVE

3/4 1-7

6-22a

INSERT

3/4 1-7

6-22a

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NOS. 144 AND 132 TO
FACILITY OPERATING LICENSE NOS. NPF-76 AND NPF-80
STP NUCLEAR OPERATING COMPANY, ET AL.
SOUTH TEXAS PROJECT, UNITS 1 AND 2
DOCKET NOS. 50-498 AND 50-499

1.0 INTRODUCTION

By a letter dated May 23, 2002, as supplemented by letter dated October 31, 2002, the South Texas Project Nuclear Operating Company (STPNOC, licensee) proposed to amend the Technical Specifications (TSs) for the South Texas Project, Units 1 and 2. The STPNOC requested approval to use Westinghouse Topical Report WCAP-13749-P-A, "Safety Evaluation Supporting the Conditional Exemption of the Most Negative End-of-Life (EOL) Moderator Temperature Coefficient Measurement," which revises the end of life (EOL) moderator temperature coefficient (MTC) surveillance requirement. WCAP-13749-P-A provides specific criteria that, if satisfied, allows the suspension of the most negative EOL measurement TS requirement. The licensee determines whether the plant operating conditions meet the specific criteria that would permit changing the TS requirement on a cycle specific basis. The licensee also requested exemption from the reporting requirement specified in WCAP-13749-P-A.

2.0 REGULATORY EVALUATION

The MTC is one of the controlling parameters for power and reactivity increases. The TS 3.1.1.3 ensures that the MTC remains within the bounds of the applicable Updated Final Safety Analysis Report. The TS 3.1.1.3 also ensures that Chapter 15 accident analyses Limiting Condition of Operation (LCO) and surveillance requirement (SR) restraints on the MTC will continue to be met. The LCO's ensure inherently stable power operations during normal operation and accident conditions.

The EOL negative MTC is very important when considering cooldown events such as steam line break accidents. The TS requires the licensee to make a MTC measurement near the EOL and compare the measurement to the TS SR value for the full-power, all rods out condition. The licensee must perform this SR seven effective full power days after reaching the equivalent of an equilibrium rated thermal power (RTP), with all rods out and a boron concentration of 300 parts per million (ppm). Because the RTP MTC value gradually becomes more negative with further core depletion and boron concentration reduction, at the 300 ppm SR value, the MTC value should necessarily be less negative than the LCO limit. Each measurement

requires several hours or more at less than full power operation, and presents a perturbation to normal operation.

As a result of the incorporation of a near end-of-cycle MTC measurement into the TSs for pressurized water reactors around 1980, a significant amount of information has been gathered on how well the vendor methodologies calculate EOL MTC. By a letter dated June 1, 1993, Westinghouse submitted to the NRC Topical Report WCAP-13749-P-A, "Safety Evaluation Supporting the Conditional Exemption of the Most Negative EOL Moderator Temperature Coefficient Measurement." In WCAP-13749-P-A, Westinghouse proposed to eliminate the SR for the EOL MTC if a specified revised prediction of the MTC and limits for several core parameters measured during the cycle are within specified bounds. Westinghouse based this request on extensive experience with EOL MTC calculations, measurements, and comparisons.

In a letter dated October 9, 1996, the NRC staff stated that it had reviewed and approved WCAP-13749-P-A. The NRC found the report acceptable for referencing in license applications to the extent specified and under limitations stated in the Technical Evaluation Report performed by Brookhaven National Laboratory and the NRC staff's Safety Evaluation Report. The requirements are (1) only use PHOENIX/ANC calculation methods for the individual plant analyses relevant to determinations for the EOL MTC plant methodology, and (2) reexamine the predictive correction if changes in core fuel designs or continued MTC calculation/measurement data show significant effect on the predictive correction. The licensee is expected to continually meet these conditions in order to have approved usage of the topical report.

Also, use of the NRC approved WCAP-13749-P-A will require the licensee to revise its core operating limit report (COLR). The licensee will have to include the topical report in TS 6.9.1.6.b as the applicable reference methodology for the COLR Section 2.3.4. The Most Negative Moderator Temperature Coefficient Limit Report (MTC Limit Report) must also be specified in the reference section of the COLR.

The WCAP-13749-P-A presents a prescription to be followed in revising the MTC TS and the COLR to provide for possible cycle-specific elimination of the EOL SR. The only change to the TS that indicates that the licensee may suspend surveillance is the addition of a footnote stating that the MTC can be suspended if benchmark criteria are met and the revised MTC prediction meets the TS EOL surveillance limit. The same topical report also includes examples of required changes that must be made to the COLR and TS 6.9 (which states the requirements for the COLR). The topical report also contains an example of the MTC Limit Report, which includes limitations, procedures, benchmark criteria, and the algorithm for determining the revised predicted surveillance MTC limit.

3.0 TECHNICAL EVALUATION

The WCAP-13749-P-A requires the licensee to submit the MTC Limit Report each cycle. The licensee proposed not to submit the MTC Limit Report each cycle. The licensee's proposal was based on two reasons: first, there is an inconsistency in the WCAP regarding the time frame associated with the data collection and the submittal of the report to the NRC, and second, the licensee did not understand the NRC's need for the report. These reasons are discussed below along with the NRC staff's evaluation.

As stated in the NRC approved WCAP, in order to bypass the measurement of the EOL MTC, the licensee will need to compare a revised prediction to the MTC to determine if it meets the SR limit. Table 4 in Westinghouse's response to the staff's request for additional information (which corresponds to Table D-2 of the topical report), has the algorithm for determining this revised prediction, which states that the measured axial flux difference used to determine the MTC prediction, is determined from an incore flux map taken at or near the burnup corresponding to a boron concentration of 300 ppm.

The reporting requirement in the topical report states that the licensee must submit a report which relies upon the above information "at least 60 days prior to the date the limit would become effective." The intent of the report is to verify and document the methodology used by the licensee. The NRC staff held a conference call with the licensee to discuss this matter on September 18, 2002. The NRC staff agreed with the licensee that the reporting time frame is unreasonable because the data required from the most recent flux map would be available at most 30 days prior to the 300 ppm boron concentration measurement. However, since this is the first application of WCAP-13749-P-A, the NRC staff does not wish to completely eliminate the reporting requirement. By letter dated October 31, 2002, STPNOC agreed to submit the MTC Limit Report for 3 cycles, as soon as the information is available. The NRC staff finds the amendment requests as stated in the May 23, 2002 submittal, subject to the conditions discussed in the teleconference call and documented by the above stated letter, to be acceptable.

The NRC staff has reviewed the May 23, 2002, and October 31, 2002, submittals by STPNOC and finds the licensee's request to use the methodology outlined in WCAP-13749-P-A, "Safety Evaluation Supporting the Conditional Exemption of the Most Negative EOL Moderator Temperature Coefficient Measurement," and reference it in TS 6.9.1.6.b to be acceptable. The NRC staff also finds the STPNOC request to modify SR 4.1.1.3b to suspend the MTC measurement, if the outlined requirements are met, to be acceptable. Additionally, the NRC staff finds it acceptable to eliminate the reporting requirement associated with the MTC Limit Report given the licensee's confirmation in its letter dated October 31, 2002, to provide the pertinent MTC Information Reports for the first 3 cycles of application of WCAP-13749-P-A no later than 60 days after the data is obtained.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Texas State official was notified of the proposed issuance of the amendments. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendments change the surveillance requirements with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendments involve no significant increase in the amounts and no significant change in the types of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration, and there has been no public comment on such finding (67 FR 45575 dated July 9, 2002). The amendments also relate to changes in administrative procedures or requirements. Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no

environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

7.0 REFERENCE

WCAP-13749-P-A, "Safety Evaluation Supporting the Conditional Exemption of the Most Negative EOL Moderator Temperature Coefficient Measurement," Westinghouse Electric Corporation, March 1997.

Principal Contributor: V. Klein

Date: November 26, 2002