



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

August 12, 2009

Mr. Edward D. Halpin
Chief Nuclear Officer
STP Nuclear Operating Company
South Texas Project
P.O. Box 289
Wadsworth, TX 77483

SUBJECT: SOUTH TEXAS PROJECT, UNITS 1 AND 2 - ISSUANCE OF AMENDMENTS
RE: REVISION TO UPDATED FINAL SAFETY ANALYSIS REPORT SECTION
13.7.2.3, "COMPONENT CATEGORIZATION PROCESS" (TAC NOS. MD9760
AND MD9761)

Dear Mr. Halpin:

The Commission has issued the enclosed Amendment No. 191 to Facility Operating License No. NPF-76 and Amendment No. 179 to Facility Operating License No. NPF-80 for the South Texas Project, Units 1 and 2, respectively. The amendments consist of changes to the Updated Final Safety Analysis Report (UFSAR) Section 13.7.2.3, "Component Categorization Process," in response to your application dated September 2, 2008.

The amendments approve the STP Nuclear Operating Company's (licensee's) request to incorporate a revision to the UFSAR Section 13.7.2.3 to add a separate set of criteria for assessing the risk significance of the risk achievement worth values of common cause failures as a part of the probabilistic risk assessment analysis of risk importance of components.

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

Sincerely,

A handwritten signature in black ink, appearing to read "Mohan C. Thadani".

Mohan C. Thadani, Senior Project Manager
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-498 and 50-499

Enclosures:

1. Amendment No. 191 to NPF-76
2. Amendment No. 179 to NPF-80
3. Safety Evaluation

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

STP NUCLEAR OPERATING COMPANY

DOCKET NO. 50-498

SOUTH TEXAS PROJECT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

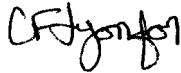
Amendment No. 191
License No. NPF-76

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by STP Nuclear Operating Company (STPNOC)* acting on behalf of itself and for NRG South Texas LP, the City Public Service Board of San Antonio (CPS), and the City of Austin, Texas (COA) (the licensees), dated September 2, 2008, 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 10 CFR Chapter I;
 - 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.

*STPNOC is authorized to act for NRG South Texas LP, the City Public Service Board of San Antonio, 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 to authorize changes to the Updated Final Safety Analysis Report (UFSAR) Section 13.7.2.3, "Component Categorization Process," to reflect the adoption of a separate set of criteria for assessing the safety significance of structures, systems, and components based on risk achievement worth values of common cause failures. The changes to the UFSAR shall be as set forth in Attachment 1 to the enclosure of the licensee's application dated September 2, 2008.
3. The license amendment is effective as of its date of issuance and shall be implemented within 60 days from the date of issuance. The licensee shall submit the changes authorized by this amendment with the next update of the UFSAR in accordance with 10 CFR 50.71(e).

FOR THE NUCLEAR REGULATORY COMMISSION



Michael T. Markley, Chief
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Date of Issuance: August 12, 2009



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

STP NUCLEAR OPERATING COMPANY

DOCKET NO. 50-499

SOUTH TEXAS PROJECT, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

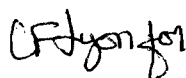
Amendment No. 179
License No. NPF-80

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by STP Nuclear Operating Company (STPNOC)* acting on behalf of itself and for NRG South Texas LP, the City Public Service Board of San Antonio (CPS), and the City of Austin, Texas (COA) (the licensees), dated September 2, 2008, 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 10 CFR Chapter I;
 - 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.

*STPNOC is authorized to act for NRG South Texas LP, the City Public Service Board of San Antonio, 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 to authorize changes to the Updated Final Safety Analysis Report (UFSAR) Section 13.7.2.3, "Component Categorization Process," to reflect the adoption of a separate set of criteria for assessing the safety significance of structures, systems, and components based on risk achievement worth values of common cause failures. The changes to the UFSAR shall be as set forth in Attachment 1 to the enclosure of the licensee's application dated September 2, 2008.
3. The license amendment is effective as of its date of issuance and shall be implemented within 60 days from the date of issuance. The licensee shall submit the changes authorized by this amendment with the next update of the UFSAR in accordance with 10 CFR 50.71(e).

FOR THE NUCLEAR REGULATORY COMMISSION



Michael T. Markley, Chief
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Date of Issuance: August 12, 2009



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NOS. 191 AND 179 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 application dated September 2, 2008 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML082530247), STP Nuclear Operating Company (STPNOC, the licensee) requested revisions to its Updated Final Safety Analysis Report (UFSAR) Section 13.7.2.3, "Component Categorization Process," for assessment of risk significance. The revisions would describe a change to the safety significance categorization process approved by the U.S. Nuclear Regulatory Commission (NRC) staff on August 3, 2001, granting STPNOC an exemption from special treatment requirements of Title 10 of the *Code of Federal Regulations* (10 CFR) Parts 21, 50, and 100 (ADAMS Accession Nos. ML011990368, ML012040470, and ML012040370, respectively).

In addition to approval of the safety significance categorization process, the August 3, 2001, approval granted exemptions from some special treatment requirements, and approved alternative treatment processes for safety-related low- and non-safety significant (LSS¹) structures, systems, and components (SSCs). "Special treatment" relates to additional regulatory requirements that provide safety assurance beyond normal industrial expectation that SSCs perform their design basis functions. Safety-related SSCs in STPNOC's medium- and high-safety significant (HSS²) categories retain their required special treatments.

The proposed amendments would approve STPNOC's methodology of assessing risk achievement worth (RAW) importance measures to become consistent with the method used in the NRC-endorsed industry guidance document, Nuclear Energy Institute (NEI) 00-04, "SSC

¹ STPNOC has non- and low-safety significant categories. Alternative special treatment requirements may be applied to all safety-related SSCs in these categories and this safety evaluation refers to both categories as LSS.

² STPNOC has medium- and high-safety significant categories. Special treatment requirements are retained for all safety-related SSCs in these categories and this safety evaluation refers to both categories as HSS.

Categorization Guideline” (ADAMS Accession No. ML052910035), and 10 CFR 50.69, “Risk-Informed Categorization and Treatment of Structures, Systems, and Components for Nuclear Power Reactors.” Currently, when assessing the risk significance of SSCs, STPNOC combines the importance of the independent failure and common cause failure (CCF) modes and compares the sum to a single RAW criterion to identify HSS SSCs. The NEI 00-04 method describes a technique to separately estimate the importance of the independent failure and the CCF modes and utilizes two different RAW criteria to identify HSS SSCs.

1.1 Proposed License Amendments

The proposed amendments will change STPNOC’s method of determining and assessing the RAW values for CCF events to become consistent with the method used in NEI 00-04. NEI 00-04 is endorsed in Regulatory Guide (RG) 1.201, “Guidelines for Categorizing Structures, Systems, and Components in Nuclear Power Plants According to their Safety Significance” (ADAMS Accession No. ML061090627). Included in the proposed change is a revision to the UFSAR Section 13.7.2.3 to add a separate set of criteria for assessing the safety significance of SSCs based on the RAW values of CCFs. The new table will place SSCs whose CCF RAW values are greater than 20 into the HSS category. The original table will be retained but will be changed to apply to only RAW values of the independent failure modes of SSCs. The table will place SSCs whose independent failure RAW values are greater than 2 into the HSS category. STPNOC will make conforming changes to its methodology to separately estimate the RAW importance values of the independent failure and the CCF modes.

1.2 Related NRC Actions

These license amendments are related to NRC’s promulgation of 10 CFR 50.69.

2.0 REGULATORY EVALUATION

This section identifies the safety characterization of SSCs related to the proposed license amendments and the associated regulatory requirements for approval of the proposed amendments.

2.1 Description of Structures, Systems, and Components

The proposed amendments revise the criteria for assessing the risk significance of the CCF of SSCs categorized by STPNOC’s safety significance categorization process. CCFs are multiple similar equipment (i.e., redundant) failures that occur within a short period of time due to the same underlying cause. Assessment of the safety significance of SSCs, not subject to CCFs (independent failure), is unchanged.

2.2 Applicable Regulations and Regulatory Criteria/Guidance

On November 22, 2004, the Commission approved the new rule under 10 CFR 50.69. This new Section permits power reactor licensees and license applicants to implement an alternative regulatory framework with respect to special treatment of SSCs. Implementation of 10 CFR 50.69 requires that licensees first categorize safety-related and non-safety-related SSCs according to their safety significance. SSCs are classified into HSS and LSS SSCs. Special

treatment requirements for the LSS SSCs may be modified from those treatments otherwise required by the regulations as permitted by the rule.

In May of 2006, the NRC staff issued Revision 1 of RG 1.201. RG 1.201, which describes a method that the NRC staff considers acceptable for use in complying with the Commission's requirements in 10 CFR 50.69 with respect to the categorization of SSCs that are considered in risk-informing special treatment requirements. RG 1.201 endorses the categorization method, with conditions, described in NEI 00-04. RG 1.201 provided no conditions related to the parts of the NEI 00-04 method that described how the RAW values are calculated and the criteria used to identify HSS SSCs based on the independent failure and CCF modes.

3.0 TECHNICAL EVALUATION

STPNOC is not requesting to implement 10 CFR 50.69, but its special treatment program is similar to one that would be needed to be developed if such a transition to 10 CFR 50.69 were implemented. Therefore, guidance that the NRC has developed to determine whether a proposed implementation of 10 CFR 50.69 is acceptable can be applied to determine whether STPNOC's program is acceptable.

The STPNOC and the NEI 00-04 safety significance categorization methods are similar. Both methods require calculation of the Fussell-Vessely (FV) and the RAW importance measures for all SSCs modeled in the PRA. Safety-related SSCs whose FV or RAW values exceed specified criteria should be identified as HSS and should continue to receive the special treatments required by the regulations. Safety-related SSCs that have FV and RAW values less than the criteria may be categorized LSS and subjected to reduced special treatment.

The STPNOC and the NEI 00-04 methods differ with respect to how the RAW values for the CCFs contribution from redundant components are combined into a representative RAW value. They also differ in the quantitative guideline values, which determine whether the individual SSCs modeled by a CCF event would be assigned HSS based on the importance of their CCF event.

STPNOC's method combines all the independent failure and CCF events into a single RAW importance measure. SSCs are assigned into the HSS category if the single RAW value exceeds 2. NEI 00-04's method calculates separate RAW values for the independent failure and the CCF events. An SSC is assigned into the HSS category if its CCF RAW value exceeds 20. Both methods assign SSCs into the HSS category if the RAW value of the independent failure exceeds 2.

STPNOC's proposed license amendments replace its method and criteria for evaluating the importance of SSCs based on the RAW values of the CCF modes with the method and criteria from NEI 00-04. As described in the August 3, 2001, exemption, the NRC determined that STPNOC's method overestimates the importance of an SSC's common cause failure mode. During the review of NEI 00-04, the NRC staff concluded that the NEI 00-04 method appropriately considers the importance of the CCF modes. Based on its review, the NRC staff concurs with the NEI 00-04 method and criteria, and agrees that those criteria may also be applied at STPNOC. Based on this conclusion, the NRC staff finds that the proposed amendments are acceptable.

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 a requirement with respect to 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 published in the *Federal Register* on December 2, 2008 (73 FR 73354). 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.

Principal Contributor: S. Dinsmore

Date: August 12, 2009

August 12, 2009

Mr. Edward D. Halpin
Chief Nuclear Officer
STP Nuclear Operating Company
South Texas Project
P.O. Box 289
Wadsworth, TX 77483

SUBJECT: SOUTH TEXAS PROJECT, UNITS 1 AND 2 - ISSUANCE OF AMENDMENTS
RE: REVISION TO UPDATED FINAL SAFETY ANALYSIS REPORT SECTION
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A copy of our related Safety Evaluation is also 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
Plant Licensing Branch IV
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*SE memo dated

**Previously Concurred

OFFICE	NRR/LPL4/PM	NRR/LPL4/LA	DRA/APLA/BC	OGC	NRR/LPL4/BC	NRR/LPL4/PM
NAME	MThadani	JBurkhardt	DHarrison*	MSpence**r	MMarkley (FLyon for)	MThadani
DATE	8/5/09	7/31/09	7/2/09	8/6/09	8/12/09	8/12/09

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