

January 5, 2004

Mr. James J. Sheppard
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
ON RADIATION MONITORING REQUIREMENTS RELATED TO
CONTAINMENT PURGE (TAC NOS. MB9102 AND MB9103)

Dear Mr. Sheppard:

The Commission has issued the enclosed Amendment No. 160 to Facility Operating License No. NPF-76 and Amendment No. 150 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 22, 2003.

The amendments revise TS 3/4.3.2, "Engineering Safety Features Actuation System Instrumentation," and TS 3/4.9.9, "Refueling Operations - Containment Ventilation Isolation System," governing radiation monitoring instrumentation, to relax restrictions on containment purge valve operation.

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/

David Jaffe, 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. 160 to NPF-76
2. Amendment No. 150 to NPF-80
3. Safety Evaluation

cc w/encls: See next page

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ACCESSION NO: ML040070435 *SE input by Memo dated 11/10/03-No major changes

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DATE	12/1/03	12/1/03	11/10/03	12/8/03	1/5/04

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STP NUCLEAR OPERATING COMPANY

DOCKET NO. 50-498

SOUTH TEXAS PROJECT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 160
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), AEP Texas Central Company, and the City of Austin, Texas (COA) (the licensees), dated May 22, 2003, 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.

*STP Nuclear Operating Company is authorized to act for Texas Genco, LP, the City Public Service Board of San Antonio, AEP Texas Central 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. 160, 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 60 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: January 5, 2004

STP NUCLEAR OPERATING COMPANY

DOCKET NO. 50-499

SOUTH TEXAS PROJECT, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 150
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), AEP Texas Central Company, and the City of Austin, Texas (COA) (the licensees), dated May 22, 2003, 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.

*STP Nuclear Operating Company is authorized to act for Texas Genco, LP, the City Public Service Board of San Antonio, AEP Texas Central 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. 150, 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 60 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: January 5, 2004

ATTACHMENT TO LICENSE AMENDMENT NOS. 160 AND 150

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 3-26

3/4 3-27

3/4 9-10

INSERT

3/4 3-26

3/4 3-27

3/4 9-10

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NOS. 160 AND 150 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 May 22, 2003, STP Nuclear Operating Company (the licensee), requested changes to the Technical Specifications (TSs) for South Texas Project (STP), Units 1 and 2. The proposed changes would revise TS 3/4.3.2, "Engineering Safety Features Actuation System Instrumentation," and TS 3/4.9.9, "Refueling Operations - Containment Ventilation Isolation System," governing radiation monitoring instrumentation, to relax restrictions on containment purge valve operation. Specifically, notes would be added to TS Table 3.3-3, "Engineered Safety Features Actuation System Instrumentation" and TS 3.9.9, Action a, to allow limited use of the containment purge system with fewer than the minimum number of required "RCB [reactor containment building] Purge Radioactivity - High" channels operable.

2.0 REGULATORY EVALUATION

The staff finds that the licensee in Section 5.2 of its May 22, 2003, submittal identified the applicable regulatory requirements and guidance. The regulatory requirements and guidance on which the staff based its acceptance are:

1. Title 10, *Code of Federal Regulations* (10 CFR) Part 50 Appendix A, "General Design Criteria," General Design Criterion 13, "Instrumentation and Control," requires that instrumentation shall be provided to monitor variables and systems over their anticipated ranges for normal operation, anticipated operational occurrences, and accidents to assure adequate safety including the containment and its associated systems.
2. NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants - LWR [light water reactor] Edition," Section 6.2.4, "Containment Isolation System," requires that systems penetrating the containment be classified as either essential or nonessential. Essential systems may include remote-manual containment isolation valves but provisions should be made to detect possible leakage from the lines outside containment.
3. NUREG-0800, Branch Technical Position CSB [Containment System Branch] 6-4, "Containment Purging During Normal Plant Operations," Position 1.e states that instrumentation and control systems provided to isolate the purge system lines should

be independently actuated by diverse parameters; e.g., containment pressure, safety injection actuation, and containment radiation level.

4. NUREG-0737, "Clarification of TMI [Three Mile Island] Action Plan Requirements," November 1980, Item II.E.4.2, states that non-essential systems be automatically isolated by the containment isolation signal.
5. The Commission's regulatory requirements related to the content of TSs are set forth in 10 CFR 50.36. This regulation requires that the TSs include items in five specific categories. These categories include: (1) safety limits, limiting safety system settings and limiting control settings, (2) limiting conditions for operation, (3) surveillance requirements, (4) design features, and (5) administrative controls.

3.0 TECHNICAL EVALUATION

The staff has reviewed the licensee's regulatory and technical analyses in support of its proposed license amendments which are described in Sections 5.0 and 4.0, respectively, of the licensee's May 22, 2003, submittal. The detailed evaluation below will support the conclusion 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.

3.1 Engineering Safety Features Actuation System (ESFAS)

The proposed change to TS Table 3.3-3, ACTION 18 for Functional Unit 3.b.4 affects only the radiation monitoring instrumentation associated with the containment ventilation isolation (CVI) function. The licensee indicated that the affected detectors and transmitters are RE/RT-8012 and RE/RT-8013, which monitor containment normal and supplementary purge exhaust. Upon either monitor sensing radiation above a preset limit, a signal is sent to the logic trains of the ESFAS and the CVI signal is actuated.

The licensee proposes to change Note 18 in TS Table 3.3-3. The proposed change revises the requirements associated with inoperable channels of the RCB Purge Radioactivity-High CVI function (Functional Unit 3.b.4); Table 3.3-3, Functional Unit 3.b.4 requires that a minimum of two (2) channels be operable.

The 48-inch normal containment purge lines are sealed closed during operating conditions other than cold shut down and refueling (MODEs 5 and 6, respectively). Valve position indicating lights are provided to permit verifying that the valves are closed. The supplementary containment purge system may be used during power operation through hot shutdown (MODEs 1 through 4). Normal and supplementary purge system isolation valves are designed to close on receipt of a CVI signal. TS Table 3.3-3 lists the signals which result in CVI. Among the signals besides RCB purge radioactivity high are: safety injection, Phase A isolation-manual isolation, and containment spray-manual initiation.

TS Table 3.3-3, ACTION 18 (for Functional Unit 3.b.4) specifies the action to be taken when less than the minimum number of channels (2) are operable. With less than the minimum

channels operable, the action currently allows operation to continue provided containment purge supply and exhaust valves are maintained closed.

The licensee's proposed change splits ACTION 18 into ACTION 18.a., 18.b.1 and b.2, and 18.c. The proposed change will allow the licensee to separately account for the functional units associated with CVI. ACTION 18.a. would apply to automatic actuation logic and actuation relays. The requirements are unchanged from the current ACTION 18. The licensee states that this is because this failure mode would result in the inability of the other actuation signals to close the purge valves if the initial signal is reset.

The licensee, in their May 22, 2003 application, states the following:

STPNOC's proposed ACTION 18.b. affects the current TS action that requires the purge to be isolated when one of the two required channels is inoperable. ACTION 18.b.1 is the proposed action with one inoperable channel and would establish a 30-day restoration time in MODE 1 - 4, and MODE 5## [##- During Core Alterations or movement of irradiated fuel within containment]. A note to ACTION 18.b. 1 is proposed to allow the supplementary purge valves to be opened in MODE 1-4 under administrative control during the 30-day allowed outage time to permit operation of the supplementary purge system for up to 2 hours at a time for the evolutions permitted by the Technical Specifications (containment pressure control, ALARA [as low as reasonably achievable] and respirable air quality needed for personnel entry into containment and for surveillance tests that required the valves to be open). The most common application is for containment pressure control, where purges are generally of short duration (less than an hour). This provision would remove a potentially burdensome requirement to maintain the purge valves closed for a situation where a purge was needed at the same time one channel of the radiation monitors was inoperable. Not being able to purge to control containment pressure could result in application of ACTION for Technical Specification 3.6.1.4, which has a 1 hour shutdown requirement.

ACTION 18.b.2 is proposed for MODEs 1-4 and MODE 5## when both channels of RCB Radioactivity - High are inoperable. This action requires the purge isolation valves to be maintained closed and is consistent with the requirements of the current TS.

Action 18.c. is proposed for MODE 6## and invokes the requirements of TS 3/4.9.9 for containment ventilation isolation during refueling operations. It is modified by a note similar to the note for MODE 5##. With one less than the minimum channels operable requirement for RCB Purge Radioactivity-High, supplementary or normal containment purge supply and isolation valves may be open for up to 6 hours at a time for required purge operation provided the valves are under administrative controls. TS 3/4.9.9 requires closure of the penetration, which may be accomplished with the use of only one valve in each penetration. The current RCB Radiation-High specification would require both valves in each penetration to be closed. This change will ensure consistency within the TSs.

The licensee indicated that the likelihood of an event that would cause a significant radioactive release in the containment requiring containment isolation during purge activity is very small. In MODEs 1-4, safety analysis credits only the SI signal for actuation of CVI. As a backup, the

operable radiation monitoring channel would still be available to activate containment isolation. Administrative control during purge evolutions with an inoperable radiation monitoring channel would include the operator ability to manually initiate CVI from the control room handswitch and typically include an assessment of plant conditions for potential actuation precursors, monitoring containment radiation and limiting purge duration. The current TS action only requires that the isolation valves be maintained closed and does not prescribe a restoration time. The selected 30 days restoration time is a reasonable time to restore a nonrisk-significant function that is readily accessible at power.

In MODES 5## and 6##, there is no credible LOCA [loss-of-coolant accident] event and the design basis postulated event is a fuel handling accident inside containment. To allow either the supplementary or normal purge supply valves to be open up to 6 hours at a time for required purge operation is acceptable because the design basis fuel handling accident in these MODEs would be expected to be a slower developing event and purge operations in support of shutdown or refueling activities are longer than those at power. The second operable channel would still be available to isolate containment purge and the administrative controls would be effective in responding to a high radiation signal.

The proposed changes to the TSs would not change the function of the affected radiation monitors and there is no significant impact on compliance with the regulatory requirements. The proposed change will maintain conformance with the requirements of 10 CFR 50.36. Accordingly, based on the above evaluation, the staff finds that the proposed changes to revise STP TSs 3.3.2, Table 3.3-3, ACTION 18 governing radiation monitoring instrumentation to relax restrictions on containment purge valve operations, are acceptable.

3.2 Refueling Operations - Containment Ventilation System

The licensee has proposed to add a note, complementary to the ACTION 18.b and 18.c notes in TS Table 3.3-3, to TS 3/4.9.9., ACTION a. The note would, "In accordance with ACTION 18.b and ACTION 18.c of Table 3.3-3" allow that "...Supplementary or Normal containment purge supply and isolation valves may be open for up to 6 hours at a time for required purge operation provided the valves are under administrative control." The proposed note in TS 3/4.9.9, Action a, is consistent with revised ACTION 18.b and 18.c in TS Table 3.3-3. This proposed change is acceptable for the same reasons described in Section 3.1, herein.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Texas State official was notified of the proposed issuance of the amendment. 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

(68 FR 59221 dated October 14, 2003). 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: R. Goel

Date: January 5, 2004

South Texas Project, Units 1 & 2

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