



South Texas Project Electric Generating Station P.O. Box 289 Wadsworth, Texas 77483

May 22, 2002
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File No.: G25
10CFR50.90
STI:31450855

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
1 White Flint North
11555 Rockville Pike
Rockville, MD 20852

South Texas Project
Units 1 and 2
Docket Nos. STN 50-498, STN 50-499
License Amendment Request
Proposed Amendment to Technical Specification 3/4.3.5,
"Atmospheric Steam Relief Valve Instrumentation"

Pursuant to 10 CFR 50.90, STP Nuclear Operating Company hereby requests the following amendment:

Amend Technical Specification 3/4.3.5 to allow automatic operation of the atmospheric steam relief valves during Mode 2 to maintain secondary side pressure at or below an indicated steam generator pressure of 1225 psig during startup and shutdown activities.

The proposed amendment involves no significant hazards determination. See Attachment 1. The proposed revised document pages are shown in Attachments 2 and 3.

STP Nuclear Operating Company requests approval of the proposed amendment by March 1, 2003 to support the spring refueling outage. Once approved, the amendment shall be implemented within 30 days.

There are no licensee commitments with this proposed amendment. A copy of this letter is provided to the State of Texas.

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This proposed amendment is an addition to the number of estimated plant-specific licensing action requests that STP Nuclear Operating Company provided in a January 17, 2002, letter to the NRC. This request will provide additional operator flexibility during plant startup and shutdown operations.

If you should have any questions concerning this matter, please contact Mr. Ken Taplett at (361) 972-8416 or me at (361) 972-8757.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on: 5/22/02



J. J. Sheppard
Vice President,
Engineering & Technical Services

Attachments:

1. Licensee's Evaluation
2. Proposed Technical Specification Changes (mark-up)
3. Proposed Technical Specification Pages (retyped)

cc:

(paper copy)

(electronic copy)

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ATTACHMENT 1

LICENSEE'S EVALUATION

1.0 DESCRIPTION

This letter is a request to amend Operating License No. NPF-76 for South Texas Project, Unit 1, and Operating License No. NPF-80 for South Texas Project, Unit 2.

The proposed change would revise the Operating Licenses to amend Technical Specification 3/4.3.5, "Atmospheric Steam Relief Valve Instrumentation" to allow automatic operation of the valves during Mode 2 to maintain secondary side pressure at or below an indicated steam generator pressure of 1225 psig during startup and shutdown operations. The current specification only allows controlling of secondary side pressure with the valves in manual control and open during these operations. This change will allow additional operator flexibility in the control of these valves. It is requested that the amendment be approved prior to March 1, 2003, with a 30-day implementation period to support the spring refueling outage.

2.0 PROPOSED CHANGE

Specifically the proposed change would revise the following:

The NOTE to Table 3.3-14 of Technical Specification 3/4.3.5 is revised to allow automatic operation of the atmospheric steam relief valves at or below an indicated steam generator pressure of 1225 psig to support startup and shutdown operations.

3.0 BACKGROUND

Technical Specification 3/4.3.5 was approved by License Amendment Numbers 114/102 to South Texas Project, Units 1 and 2, respectively on August 16, 1999 (See References A and B). This new technical specification for the atmospheric steam relief valves ensured that the automatic feature of the valves remained operable during Modes 1 and 2. In order to support startup and shutdown activities (including post-refueling low power physics testing), the Specification allowed the valves to be operated in manual and open in Mode 2 as long as the secondary side pressure was maintained at or below an indicated steam generator pressure of 1225 psig to ensure the safety analysis limit would not be exceeded in the event of the accident.

Technical Specification 3/4.3.5 requires that the atmospheric steam relief valves [to be referred to as the steam generator power-operated relief valves (SG PORVs) hereafter] automatic controls be operable with a nominal setpoint of 1225 psig in Modes 1 and 2. This is because the safety analyses assumes automatic operation of the valves with a nominal setpoint of 1225 psig with uncertainties. In order to support startup and shutdown activities (including post-refueling low power physics testing), the current Specification allows the valves only to be operated in manual and open in Mode 2 to maintain the secondary side pressure at or below an indicated steam generator pressure of 1225 psig. The allowance for manual operation at or below the nominal automatic setpoint is provided in a

footnote to Table 3.3-14. The proposed change of this amendment request adds the words “or in automatic operation” to the footnote. Attachment 2 provides a mark-up of the proposed change. The change will still require that the secondary side pressure be maintained at or below an indicated steam generator pressure of 1225 psig when using the automatic mode of operation. This change will allow for additional operator flexibility for control of these valves during startup and shutdown activities. Operating experience has determined that automatic control of the setpoint is the preferred method of valve control when steady-state conditions exist.

Upon approval of this change, STP Nuclear Operating Company plans to revise the Technical Specification Bases by adding the following statement:

“In addition to support startup and shutdown activities (including post-refueling low power physics testing), secondary side pressure can be maintained in Mode 2 with the atmospheric steam relief valves left in automatic operation as long as the setpoint is controlled at or below an indicated steam generator pressure of 1225 psig.”

The SG PORVs are provided to protect the steam generator and the main steam system in the event of high steam pressure. In addition, the SG PORVs are provided to allow a controlled cooldown of the plant when the main condenser is not available or the main steam isolation valves are shut. The accident analyses credits the automatic operation of the SG PORVs in Modes 1 and 2. The hydraulic operation of the SG PORVs and the electrical power requirements are described in the Updated Final Safety Analysis Report (UFSAR) and in Reference A.

Operation of the SG PORVs can be controlled either automatically or manually. When the valves are selected for automatic operation, the opening and closing of the valves is controlled by circuitry that compares secondary pressure with the valve setpoint. The automatic control setpoint is adjusted from the valve control station on the main control room control board. When the valves are selected for automatic operation, a manual adjustment of the setpoint will determine the automatically controlled secondary pressure. When the valves are selected for manual operation, the valves can be manually opened and closed from the valve control station while monitoring secondary pressure.

The function and operation of the SG PORVs is described in Section 10.3.2.4 of the UFSAR. The automatic operation of these valves that is assumed in the safety analysis is described in Sections 15.2.7 and 15.6.5 of the UFSAR.

4.0 TECHNICAL ANALYSIS

The proposed amendment revises the footnote to Table 3.3-14 for Technical Specification 3/4.3.5. See the mark-up in Attachment 2. The revision to the footnote will allow for automatic operation of the SG PORVs in addition to manual operation in Mode 2 for additional operator flexibility. The specific conditions are for supporting startup and shutdown activities (including post-refueling low power physics testing), provided that the secondary side pressure is maintained at or below an indicated steam generator pressure of 1225 psig. No design change is required to implement this revision since both methods for controlling the valves already exist in the plant configuration. The

safety analysis will be unaffected by this change since the secondary side pressure will be maintained at or below the control limit assumed in the accident analysis. Manual control of the valves is already allowed by the specification. In effect, the additional method of control of the valves that is being proposed is another method of manually controlling the valves by adjustment of the valve setpoint. The operator is required to adjust the setpoint for automatic operation at 1225 psig when the footnote no longer applies.

The proposed change is consistent with the purpose of Technical Specification 3/4.3.5. The change allows for an additional method of controlling the SG PORVs during startup and shutdown activities. This allows for additional operator flexibility for controlling these valves when in this condition. Since approval of Technical Specification 3/4.3.5, operating experience has determined that this additional flexibility is desired for plant control.

The proposed amendment is not risk-informed.

5.0 REGULATORY SAFETY ANALYSIS

5.1 No Significant Hazards Consideration

STP Nuclear Operating Company has evaluated whether a significant hazards consideration is involved with the proposed amendment by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of amendment," as discussed below:

1. Does the proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No.

The proposed change only provides another method of controlling the SG PORVs under specified operating conditions. The operating conditions in Specification 3/4.3.5 remain unchanged. No change is required to plant design since the proposed method of control is already part of the plant's configuration. The proposed method of control is the same method of control normally required by the specification in Modes 1 and 2. The proposed method of control will not impact the accident analysis assumptions or results. Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No.

The proposed method of controlling the SG PORVs is the same method that these valves are controlled in Modes 1 and 2 by the specification under normal conditions. The proposed change will allow the setpoint of these valves to be adjusted to support startup and shutdown activities. The adjustment of the setpoint is restricted so that the accident analysis is not impacted. No change to the design of the valves or plant configuration is required to implement the proposed change. Therefore, the proposed change does not create the possibility of a new or different kind of accident from any previously evaluated.

3. Does the proposed change involve a significant reduction in a margin of safety?

Response: No.

The proposed change that will allow for an additional method of controlling the SG PORVs during startup and shutdown activities is consistent with the operating restrictions for the current method of valve control. The accident analysis assumptions and results will remain unaffected. Therefore, the proposed change does not involve a significant reduction in a margin of safety.

Based on the above, The STP Nuclear Operating Company concludes that the proposed amendments present no significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and, accordingly, a finding of "no significant hazards consideration" is justified.

5.2 Applicable Regulatory Requirements/Criteria

The regulatory bases for Technical Specification 3/4.3.5 is to ensure that adequate safety injection flow into the reactor coolant system will occur during a small break LOCA so that the peak clad temperature limit of 10CFR50.46 is met and to prevent pressurizer overfill for a loss of normal feedwater accident. This change is consistent with these bases.

10 CFR Part 50, Appendix A, General Design Criterion (GDC) 20, "Protection system functions", requires that the protection system be designed (1) to initiate automatically the operation of appropriate systems including the reactivity control systems, to assure that specified acceptable fuel design limits are not exceeded as a result of anticipated operational occurrences and (2) to sense accident conditions and to initiate the operation of systems and components important to safety. The SG PORV automatic controls must be operable with a nominal setpoint of 1225 psig in Modes 1 and 2 because the safety analysis assumes automatic operation of the valves with a nominal setpoint of 1225 psig with uncertainties for mitigation of the small break loss of coolant accident. The proposed change is consistent with the current operating restrictions in the specification so that the assumptions in the accident analysis are met.

The following General Design Criteria are met because no change is being proposed to the system design by the proposed amendment.

- Criterion 21: Protection system reliability and testability
- Criterion 22: Protection system independence
- Criterion 23: Protection system failure modes
- Criterion 24: Separation of protection and control systems
- Criterion 29: Protection against anticipated operational occurrences

In conclusion, based on the considerations discussed above, (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 amendment will not be inimical to the common defense and security or to the health and safety of the public.

6.0 ENVIRONMENTAL CONSIDERATION

The proposed amendment changes a requirement with respect to use of a facility component. However, (i) the proposed amendment involves no significant hazards consideration, (ii) there is no significant change in the types or significant increase in the amounts of any effluent that may be released offsite, and (iii) there is no significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed amendment meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

7.0 REFERENCES

- A. Letter from T. H. Cloninger to the NRC Document Control Desk, "Proposed New Amendment for Atmospheric Steam Relief Valve Instrumentation and Revised Amendment of Technical Specification 3.7.1.6, Atmospheric Steam Relief Valves," dated March 22, 1999 (NOC-AE-000462)
- B. Letter from T. W. Alexion to W. T. Cottle, "South Texas Project, Units 1 and 2 – Issuance of Amendments re: Atmospheric Steam Relief Valves (TAC Nos. MA5078 and MA5079)", dated August 16, 1999 (ST-AE-NOC-000487)

This specification is unique to the South Texas Project units. Therefore, there is no precedent. References A and B provide the information on the development and approval of this specification.

ATTACHMENT 2

**PROPOSED TECHNICAL SPECIFICATION CHANGES
(MARK-UP)**

INSTRUMENTATION

3/4.3.5 ATMOSPHERIC STEAM RELIEF VALVE INSTRUMENTATION

LIMITING CONDITION FOR OPERATION:

3.3.5.1 The atmospheric steam relief valve instrumentation shown in Table 3.3-14 shall be OPERABLE.

APPLICABILITY: As shown in Table 3.3-14

ACTION: As shown in Table 3.3-14

SURVEILLANCE REQUIREMENTS:

- 4.3.5.1 Perform a CHANNEL CHECK on each atmospheric steam relief valve automatic actuation channel at least once per 12 hours.
- 4.3.5.2 Perform a CHANNEL CALIBRATION on each atmospheric steam relief valve automatic actuation channel at a nominal setpoint of 1225 psig \pm 7 psi at least once every 18 months.
- 4.3.5.3 Perform an ANALOG CHANNEL OPERATIONAL TEST on each atmospheric steam relief valve automatic actuation channel at a nominal setpoint of 1225 psig \pm 7 psi at least once every 18 months.

No changes on this page

TABLE 3.3-14ATMOSPHERIC STEAM RELIEF VALVE INSTRUMENTATION

<u>FUNCTIONAL UNIT</u>	<u>REQUIRED NO. OF CHANNELS</u>	<u>APPLICABLE MODES</u>	<u>ACTION</u>
Manual actuation control channels	4 (1 / valve)	1, 2, 3, 4*	1
Automatic actuation control channels	4 (1 / valve)	1, 2 [#]	2

No changes on this page

TABLE 3.3-14 (Continued)

TABLE NOTATIONS

- * When steam generators are being used for decay heat removal.
- # Atmospheric steam relief valve(s) may be in manual operation and open, **or in automatic operation**, to maintain secondary side pressure at or below an indicated steam generator pressure of 1225 psig.

ACTION STATEMENTS

- ACTION 1 - With the number of OPERABLE channels less than the required number of channels, declare the affected valve(s) inoperable and apply Technical Specification 3.7.1.6.
- ACTION 2 -
- a. With one less than the required number of OPERABLE channels, restore the inoperable channel to OPERABLE status within 7 days; or be in at least HOT STANDBY within the next 6 hours.
 - b. With two less than the required number of OPERABLE channels, restore at least three channels to OPERABLE status within 72 hours; or be in at least HOT STANDBY within the next 6 hours.

ATTACHMENT 3

**PROPOSED TECHNICAL SPECIFICATION PAGES
(RETYPE)**

TABLE 3.3-14 (Continued)

TABLE NOTATIONS

- * When steam generators are being used for decay heat removal.
- # Atmospheric steam relief valve(s) may be in manual operation and open, or in automatic operation, to maintain secondary side pressure at or below an indicated steam generator pressure of 1225 psig.

ACTION STATEMENTS

- ACTION 1 - With the number of OPERABLE channels less than the required number of channels, declare the affected valve(s) inoperable and apply Technical Specification 3.7.1.6.
- ACTION 2 -
- a. With one less than the required number of OPERABLE channels, restore the inoperable channel to OPERABLE status within 7 days; or be in at least HOT STANDBY within the next 6 hours.
 - c. With two less than the required number of OPERABLE channels, restore at least three channels to OPERABLE status within 72 hours; or be in at least HOT STANDBY within the next 6 hours.