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

June 12, 2001
NOC-AE-01001107
File No.: G20.02.01
G21.02.01
STI 31290648

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555-0001

South Texas Project
Units 1 and 2
Docket Nos. STN 50-498, STN 50-499
Supplement To:
Proposed Amendment to South Texas Project Technical Specifications to
Modify Requirements Applicable When Actions Require
No Positive Reactivity Additions

References: 1) Letter from J. J. Sheppard to NRC Document Control Desk dated December 20, 2000 (NOC-AE-000394)
2) Letter from J. J. Sheppard to NRC Document Control Desk dated February 1, 2001 (NOC-AE-01001022)
3) Letter from J. J. Sheppard to NRC Document Control Desk dated February 28, 2001 (NOC-AE-01001038)

STP Nuclear Operating Company (STPNOC) submits this supplement to NOC-AE-000394, dated December 20, 2000, which proposed to amend South Texas Project Operating Licenses NPF-76 and NPF-80 by incorporating the changes attached to that correspondence. The proposed changes would revise the Technical Specification and Technical Requirements Manual requirements applicable when actions direct suspension of operations involving positive reactivity additions.

This supplement is submitted to revise Inserts 1 and 16 as provided in Reference 1 and provide additional revisions as a result of these insert changes. During discussions with the Nuclear Regulatory Commission, it was identified that more appropriate inserts contained in Technical Specification Task Force Change Traveler TSTF-286 Rev. 2 should be applied to the proposed changes to Technical Specification pages 3/4 3-7 and 3/4 9-2.

A001

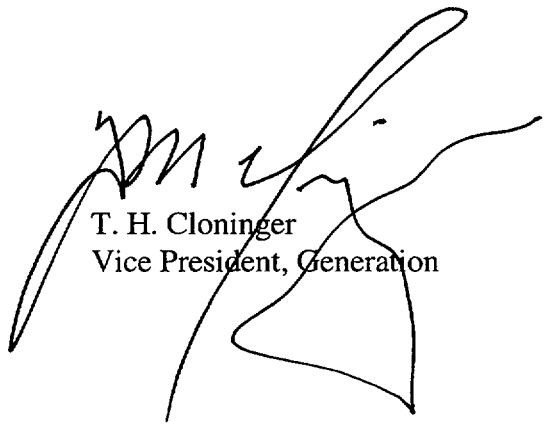
The revised insert for Technical Specification page 3/4 3-7 Action 4, which presently applies to Source Range Neutron Flux and Extended Range Neutron Flux Instrumentation, was determined to not adequately apply to the Extended Range Neutron Flux. TSTF-286 Rev. 2 and the Standard Westinghouse Technical Specifications do not address Extended Range Neutron Flux Instrumentation. Therefore a new ACTION 5 has been developed for this instrumentation and is enclosed as a new proposed Insert 26. Attachment 2 provides site specific justification for establishing the new Action 5 for this instrumentation. The Technical Specification Bases page B3/4 3-1 has an updated Insert 19 that reflects the revised wording for Insert 1 and the addition of Action 5. Attachment 3 provides revised pages to replace the corresponding pages in the original proposed amendment.

STPNOC also revised the insert initially proposed for TS 3.9.2 ACTION a. The proposed revised insert (Insert 16) is now consistent with the TSTF wording for the same application. This change is also provided in the page reconciliations in Attachment 3. The associated Bases change that was submitted in the initial application is still acceptable.

In accordance with 10 CFR 50.91(b), STPNOC is notifying the State of Texas of this request for license amendment by providing a copy of this letter and its attachments.

The changes do not affect the evaluations previously submitted. This submittal letter contains no new licensing commitments.

If there are any questions regarding the proposed amendment or this supplement, please contact Mr. S. M. Head at (361) 972-7136 or me at (361) 972-8787.



T. H. Cloninger
Vice President, Generation

WRB/
Attachments:
1. Affidavit
2. Site Specific Justification for New Action 5 for Technical Specification Table 3.3-1
3. Updated/ corrected pages for NOC-AE-000394

cc:

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U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555-0001

ATTACHMENT 1

AFFIDAVIT

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of	)	
	)	
STP Nuclear Operating Company	)	Docket Nos. STN 50-498
	)	STN 50-499
	)	
South Texas Project Units 1 and 2	)	

AFFIDAVIT

I, T. H. Cloninger, being duly sworn, hereby depose and say that I am Vice President, Generation of STP Nuclear Operating Company; that I am duly authorized to sign and file with the Nuclear Regulatory Commission the attached supplemental information; that I am familiar with the content thereof; and that the matters set forth therein are true and correct to the best of my knowledge and belief.

T. H. Cloninger
Vice President,
Generation

STATE OF TEXAS	)	
	)	
COUNTY OF MATAGORDA	)	

Subscribed and sworn to before me, a Notary Public in and for the State of Texas, this 12th day of June, 2001.

LINDA RITTENBERRY
Notary Public, State of Texas
My Commission Expires
OCT. 9, 2001

Linda Rittenberry
Notary Public in and for the
State of Texas

ATTACHMENT 2

Site Specific Justification for New Action 5 for Technical Specification Table 3.3-1

South Texas Project
Site Specific Justification
for New Action 5 for
Technical Specification
Table 3.3-1

The revised insert for Technical Specification page 3/4 3-7 Action 4 of Table 3.3-1, which currently applies to Source Range Neutron Flux and Extended Range Neutron Flux, was determined to not adequately apply to the Extended Range Neutron Flux Instrumentation. Therefore a new Action 5 and associated bases have been developed for this instrumentation.

New Action 5 of Table 3.3-1 of the Technical Specifications applies to the Extended Range Neutron Flux Instrumentation in Modes 3,4,5:

> ACTION 5- With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, suspend all operations involving positive reactivity changes. Plant temperature changes or boron dilution is allowed provided the change is accounted for in the calculated SHUTDOWN MARGIN.

The Standard Westinghouse Technical Specifications (NUREG-1431) do not address Extended Range Neutron Flux Instrumentation. The STP Extended Range Neutron Flux Instrumentation does not serve a reactor trip function. It provides neutron flux monitoring and an alarm function in modes 3, 4 and 5.

The proposed action is appropriate in Modes 3, 4 and 5 because Reactor Coolant System boron concentration may be as high as 2800-3000 ppm during preparations for and return from refueling operations. At Reactor Coolant System (RCS) boron concentrations in this range, there is a positive moderator temperature coefficient.

Boron concentrations at these high refueling values are unique to the South Texas Project reactors due to the Rapid Refueling configuration in our design, whereby all control rods are removed from the reactor core with the upper internals and Reactor head assembly during refueling operations. Introduction of RCS temperature changes, including temperature increases when operating with a positive moderator temperature coefficient, and boron dilution are permitted to allow flexibility for Reactor Operations personnel in routine plant control operations, provided they are accounted for in the calculated Shutdown Margin.

The requirements of Action 5 ensure an acceptable margin to maintaining subcritical operation. The Action indicates that normal plant control operations that individually add limited positive reactivity (e.g. temperature or boron fluctuation associated with RCS inventory management or temperature control) are not precluded by this Action, provided they are accounted for in the calculated Shutdown Margin required by Technical Specifications.

ATTACHMENT 3

REVISED PAGES
FOR
NOC-AE-000394
(Original Application dated December 20, 2000)

The attached Revised pages, listed below, are provided as replacement pages for attachments contained in NOC-AE-000394.

Marked up pages and Inserts (Attachment 5)

3/4 3-2
3/4 3-7
Insert 1
Insert 26
Insert 16
Insert 19

Reconciled pages (Attachment 7)

3/4 3-2
3/4 3-7
3/4 9-2
B 3/4 3-1

TABLE 3.3-1

REACTOR TRIP SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
1. Manual Reactor Trip	2	1	2	1, 2	1
	2	1	2	3*, 4*, 5*	10
2. Power Range, Neutron Flux					
a. High Setpoint	4	2	3	1, 2	2
b. Low Setpoint	4	2	3	1###, 2	2
3. Power Range, Neutron Flux High Positive Rate	4	2	3	1, 2	2
4. Deleted					
5. Intermediate Range, Neutron Flux	2	1	2	1###, 2	3
6. Source Range, Neutron Flux					
a. Startup	2	1	2	2##	4
b. Shutdown	2	1	2	3*, 4*, 5*	10
7. Extended Range, Neutron Flux	2	0	2	3, 4, 5	~~4~~ 5
8. Overtemperature ΔT	4	2	3	1, 2	6
9. Overpower ΔT	4	2	3	1, 2	6
10. Pressurizer Pressure--Low (Interlocked with P-7)	4	2	3	1	6
11. Pressurizer Pressure--High	4	2	3	1, 2	6
12. Pressurizer Water Level--High (Interlocked with P-7)	4	2	3	1	6

Unit 1 - AMENDMENT NO. 34
Unit 2 - AMENDMENT NO. 25

TABLE 3.3-1 (Continued)

ACTION STATEMENTS (Continued)

ACTION 3 - With the number of channels OPERABLE one less than the Minimum Channels OPERABLE requirement and with the THERMAL POWER level:

a. Below the P-6 (Intermediate Range Neutron Flux Interlock) Setpoint, restore the inoperable channel to OPERABLE status prior to increasing THERMAL POWER above the P-6 Setpoint, and

b. Above the P-6 (Intermediate Range Neutron Flux Interlock) Setpoint but below 10% of RATED THERMAL POWER, restore the inoperable channel to OPERABLE status prior to increasing THERMAL POWER above 10% of RATED THERMAL POWER.

ACTION 4 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, suspend all operations involving positive reactivity changes. ← (insert #1)

ACTION 5 - ~~(Not Used)~~ ← (insert #26)

ACTION 6 - With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed provided the following conditions are satisfied:

a. The inoperable channel is placed in the tripped condition within 6 hours, and

b. The Minimum Channels OPERABLE requirement is met; however, the inoperable channel may be bypassed for up to 4 hours for surveillance testing of other channels per Specification 4.3.1.1.

ACTION 7 - (Not Used)

ACTION 8 - With less than the Minimum Number of Channels OPERABLE, within 1 hour determine by observation of the associated permissive annunciator window(s) that the interlock is in its required state for the existing plant condition, or apply Specification 3.0.3.

ACTION 9 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, be in at least HOT STANDBY within 6 hours; however, one channel may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.1.1, provided the other channel is OPERABLE.

Proposed Insert to Technical Specification Page 3/4 3-7, ACTION 4

Insert 1

Limited plant cooldown or boron dilution is allowed provided the change is accounted for in the calculated SHUTDOWN MARGIN.

Proposed Insert to Technical Specification page 3/4 3-7, ACTION 5

Insert 26

With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, suspend all operations involving positive reactivity changes. Plant temperature changes or boron dilution is allowed provided the change is accounted for in the calculated SHUTDOWN MARGIN.

Proposed Insert to Technical Specification Page 3/4 9-2

Insert 16

operations that would cause introduction into the RCS of coolant with boron concentration less than required to meet the boron concentration of LCO 3.9.1.

Proposed Insert to Technical Specification Bases Page B 3/4 3-1

Insert 19

ACTION 4 of Table 3.3-1 is modified to indicate that normal plant control operations that individually add limited positive reactivity (e.g., temperature or boron fluctuations associated with RCS inventory management or temperature control) are not precluded by this Action, provided they are accounted for in the calculated SHUTDOWN MARGIN required by Technical Specifications. Introduction of coolant inventory must be from sources that have a boron concentration greater than what would be required in the RCS for minimum SHUTDOWN MARGIN. This may result in an overall reduction in RCS boron concentration, but provides acceptable margin to maintaining subcritical operation. Introduction of temperature changes must also be evaluated to ensure they do not result in a loss of SHUTDOWN MARGIN. Control rod withdrawal is not allowed.

ACTION 5 of Table 3.3-1 for the Extended Range Neutron Flux Instrumentation is similar to ACTION 4 for the Source Range Instrumentation. The Action indicates that normal plant control operations that individually add limited positive reactivity (e.g. temperature or boron fluctuations associated with RCS inventory management or temperature control) are not precluded by this Action, provided they are accounted for in the calculated SHUTDOWN MARGIN required by Technical Specifications. Introduction of coolant inventory must be from sources that have a boron concentration greater than that required in the RCS for minimum SHUTDOWN MARGIN or refueling boron concentration. This may result in an overall reduction in RCS boron concentration, but provides acceptable margin to maintaining subcritical operation. Introduction of temperature changes including temperature increases when operating with a positive Moderator Temperature Coefficient must also be evaluated to ensure they do not result in a loss of SHUTDOWN MARGIN. Control rod withdrawal is not allowed.

TABLE 3.3-1

REACTOR TRIP SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
1. Manual Reactor Trip	2	1	2	1, 2	1
	2	1	2	3*, 4*, 5*	10
2. Power Range, Neutron Flux					
a. High Setpoint	4	2	3	1, 2	2
b. Low Setpoint	4	2	3	1###, 2	2
3. Power Range, Neutron Flux High Positive Rate	4	2	3	1, 2	2
4. Deleted					
5. Intermediate Range, Neutron Flux	2	1	2	1###, 2	3
6. Source Range, Neutron Flux					
a. Startup	2	1	2	2##	4
b. Shutdown	2	1	2	3*, 4*, 5*	10
7. Extended Range, Neutron Flux	2	0	2	3, 4, 5	5
8. Overtemperature ΔT	4	2	3	1, 2	6
9. Overpower ΔT	4	2	3	1, 2	6
10. Pressurizer Pressure -- Low (Interlocked with P-7)	4	2	3	1	6
11. Pressurizer Pressure-- High	4	2	3	1, 2	6
12. Pressurizer Water Level--High (Interlocked with P-7)	4	2	3	1	6

Unit 1 - Amendment No. 34
Unit 2 - Amendment No. 25

TABLE 3.3-1 (Continued)

ACTION STATEMENTS (Continued)

ACTION 3 - With the number of channels OPERABLE one less than the Minimum Channels OPERABLE requirement and with the THERMAL POWER level:

a. Below the P-6 (Intermediate Range Neutron Flux Interlock) Setpoint, restore the inoperable channel to OPERABLE status prior to increasing THERMAL POWER above the P-6 Setpoint, and

b. Above the P-6 (Intermediate Range Neutron Flux Interlock) Setpoint but below 10% of RATED THERMAL POWER, restore the inoperable channel to OPERABLE status prior to increasing THERMAL POWER above 10% of RATED THERMAL POWER.

ACTION 4 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, suspend all operations involving positive reactivity changes. Limited plant cooldown or boron dilution is allowed provided the change is accounted for in the calculated SHUTDOWN MARGIN.

ACTION 5 – With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, suspend all operations involving positive reactivity changes. Plant temperature changes or boron dilution is allowed provided the change is accounted for in the calculated SHUTDOWN MARGIN.

ACTION 6 - With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed provided the following conditions are satisfied:

a. The inoperable channel is placed in the tripped condition within 6 hours, and

b. The Minimum Channels OPERABLE requirement is met; however, the inoperable channel may be bypassed for up to 4 hours for surveillance testing of other channels per Specification 4.3.1.1.

ACTION 7 - (Not Used)

ACTION 8 - With less than the Minimum Number of Channels OPERABLE, within 1 hour determine by observation of the associated permissive annunciator window(s) that the interlock is in its required state for the existing plant condition, or apply Specification 3.0.3.

ACTION 9 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, be in at least HOT STANDBY within 6 hours; however, one channel may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.1.1, provided the other channel is OPERABLE.

3/4.9.2 INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.9.2 As a minimum, two Source Range Neutron Flux Monitors* shall be OPERABLE, each with continuous visual indication in the control room and one with audible indication in the containment and control room.

APPLICABILITY: MODE 6.

ACTION:

a. With one of the above required monitors inoperable or not operating, immediately suspend all operations involving CORE ALTERATIONS or operations that would cause introduction into the RCS of coolant with boron concentration less than required to meet the boron concentration of LCO 3.9.1.

b. With both of the above required monitors inoperable or not operating, determine the boron concentration of the Reactor Coolant System at least once per 12 hours.

SURVEILLANCE REQUIREMENTS

4.9.2 Each Source Range Neutron Flux Monitor shall be demonstrated OPERABLE by performance of:

a. A CHANNEL CHECK at least once per 12 hours,

b. A CHANNEL CALIBRATION, excluding the Neutron detectors, every 18 months.

* An Extended Range Neutron Flux Monitor may be substituted for one of the Source Range Neutron Flux Monitors provided the OPERABLE Source Range Neutron Flux Monitor is capable of providing audible indication in the containment and control room.

3/4.3.1 and 3/4.3.2 REACTOR TRIP SYSTEM and ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

The OPERABILITY of the Reactor Trip System and the Engineered Safety Features Actuation System instrumentation and interlocks ensures that: (1) the associated ACTION and/or Reactor trip will be initiated when the parameter monitored by each channel or combination thereof reaches its Setpoint, (2) the specified coincidence logic is maintained, (3) sufficient redundancy is maintained to permit a channel to be out-of-service for testing or maintenance, and (4) sufficient system functional capability is available from diverse parameters.

The OPERABILITY of these systems is required to provide the overall reliability, redundancy, and diversity assumed available in the facility design for the protection and mitigation of accident and transient conditions. The integrated operation of each of these systems is consistent with the assumptions used in the safety analyses. The Surveillance Requirements specified for these systems ensure that the overall system functional capability is maintained comparable to the original design standards. The periodic surveillance tests performed at the minimum frequencies are sufficient to demonstrate this capability. Specified surveillance intervals and surveillance and maintenance outage times have been determined in accordance with WCAP-10271, "Evaluation of Surveillance Frequencies and Out of Service Times for the Reactor Protection Instrumentation System," supplements to that report, and the South Texas Project probabilistic safety assessment (PSA). Surveillance intervals and out of service times were determined based on maintaining an appropriate level of reliability of the Reactor Protection System instrumentation.

ACTION 4 of Table 3.3-1 is modified to indicate that normal plant control operations that individually add limited positive reactivity (e.g., temperature or boron fluctuations associated with RCS inventory management or temperature control) are not precluded by this Action, provided they are accounted for in the calculated SHUTDOWN MARGIN required by Technical Specifications. Introduction of coolant inventory must be from sources that have a boron concentration greater than what would be required in the RCS for minimum SHUTDOWN MARGIN. This may result in an overall reduction in RCS boron concentration, but provides acceptable margin to maintaining subcritical operation. Introduction of temperature changes must also be evaluated to ensure they do not result in a loss of SHUTDOWN MARGIN. Control rod withdrawal is not allowed.

ACTION 5 of Table 3.3-1 for the Extended Range Neutron Flux Instrumentation is similar to ACTION 4 for the Source Range Instrumentation. The Action indicates that normal plant control operations that individually add limited positive reactivity (e.g. temperature or boron fluctuations associated with RCS inventory management or temperature control) are not precluded by this Action, provided they are accounted for in the calculated SHUTDOWN MARGIN required by Technical Specifications. Introduction of coolant inventory must be from sources that have a boron concentration greater than that required in the RCS for minimum SHUTDOWN MARGIN or refueling boron concentration. This may result in an overall reduction in RCS boron concentration, but provides acceptable margin to maintaining subcritical operation. Introduction of temperature changes including temperature increases when operating with a positive Moderator Temperature Coefficient must also be evaluated to ensure they do not result in a loss of SHUTDOWN MARGIN. Control rod withdrawal is not allowed.

The Engineered Safety Features Actuation System Instrumentation Trip Setpoints specified in Table 3.3-4 are the nominal values at which the bistables are set for each functional unit. A Setpoint is considered to be adjusted consistent with the nominal value when the "as measured" Setpoint is within the band allowed for calibration accuracy.