



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

December 6, 1999  
NOC-AE-000716  
File No.: G20.02.01  
G21.02.01  
10CFR50.90

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  
Proposed Amendment to South Texas Project Technical Specifications to  
Revise the Definition of Core Alterations

STP Nuclear Operating Company (STPNOC) proposes to amend South Texas Project Operating Licenses NPF-76 and NPF-80 by incorporating the attached change into the Technical Specifications. The proposed change would revise the definition of core alterations to one that is consistent with the Improved Technical Specifications.

The change would more explicitly define core alterations as those operations that have a potential for adding positive reactivity to the core and excluding from the definition the use of "non-reactive" components that would not significantly affect core reactivity.

STPNOC has reviewed the proposed amendment pursuant to 10CFR50.92 and determined that it does not involve a significant hazards consideration. In addition, South Texas has determined that the proposed amendment satisfies the criteria of 10CFR51.22(c)(9) for categorical exclusion from the requirement for an environmental assessment. The South Texas Plant Operations Review Committee and the Nuclear Safety Review Board have reviewed and approved the proposed amendment.

A001

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.

Although STPNOC acknowledges this proposed amendment is not a Priority 1 item, STPNOC requests review and approval by February 29, 2000, to allow the proposed specification to be implemented in support of the upcoming Unit 1 Steam Generator Replacement outage. STPNOC also requests 30 days for implementation of the approved amendment.

STPNOC has determined that this submittal letter contains no new licensing commitments.

If there are any questions regarding the proposed amendment, please contact Mr. A. W. Harrison at (361) 972-7298 or me at (361) 972-8757.



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

JRM/

Attachments:

1. Affidavit
2. Technical Specification Change Description and Safety Evaluation
3. Determination of No Significant Hazards Consideration
4. Environmental Assessment
5. Technical Specifications Marked-up Changes
6. Technical Specifications Pages with Proposed Changes Incorporated

cc:

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

# **ATTACHMENT 1**

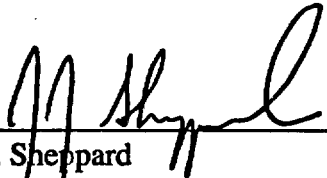
## **AFFIDAVIT**

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 | ) |                        |

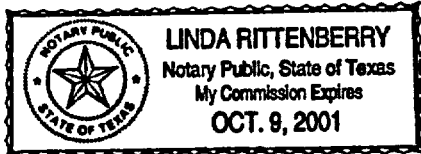
AFFIDAVIT

I, J. J. Sheppard, being duly sworn, hereby depose and say that I am Vice President, Engineering & Technical Services of STP Nuclear Operating Company; that I am duly authorized to sign and file with the Nuclear Regulatory Commission the attached proposed revision to the Technical Specification definition of core alterations; 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.

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

STATE OF TEXAS )  
 )  
 COUNTY OF MATAGORDA )

6<sup>th</sup> day of December, 1999. Subscribed and sworn to before me, a Notary Public in and for the State of Texas, this



  
 \_\_\_\_\_  
 Notary Public in and for the  
 State of Texas

# **ATTACHMENT 2**

## **TECHNICAL SPECIFICATION CHANGE DESCRIPTION AND SAFETY EVALUATION**

## **BACKGROUND**

The proposed change will revise Technical Specifications Definition 1.9, "Core Alterations", to one that is consistent with NUREG-1431, Revision 1, Improved Standard Technical Specifications for Westinghouse Plants. The current South Texas Project Technical Specifications definition of core alterations includes the "movement or manipulation of any component within the reactor vessel with the vessel head removed and fuel in the vessel." The use of the term "component" within this definition is itself undefined and has historically led to questions regarding whether the movement of "non-reactive" items such as cameras, lights, tools, etc. constitutes a core alteration. Additionally, the current definition of core alterations would include the insertion or removal of the movable incore detector thimbles, although this activity would not be considered a core alteration as defined in the Improved Technical Specifications.

## **DESCRIPTION OF CHANGES**

The proposed revision to the definition of core alterations more explicitly defines those operations that have the potential for adding positive reactivity to the core and excluding from the definition the use of "non-reactive" components that would not significantly change core reactivity. Also, the word "conservative" would be deleted from the second sentence of the definition, since it is redundant. The proposed definition will read as follows:

"CORE ALTERATIONS shall be the movement of any fuel, sources, or reactivity control components within the reactor vessel with the vessel head removed and fuel in the vessel. Suspension of CORE ALTERATIONS shall not preclude completion of movement of a component to a safe position."

## **SAFETY EVALUATION**

Section 3/4.9, "Refueling Operations", of the South Texas Project Technical Specifications includes several Specifications that are applicable during periods of core alterations. Others require that operations involving core alterations be suspended under certain conditions. The current Technical Specifications Definition 1.9 describes core alterations as the movement or manipulation of any component within the reactor vessel with the vessel head removed and fuel in the vessel. However, the term "component" is not defined. In the past, STP has considered the term "component" to mean an item that can affect core reactivity or core geometry (i.e., a fuel assembly, burnable poison rod assembly, control rod, etc.). Because the term "component" is not defined, questions have recently arisen regarding whether the movement of "non-reactive" items (i.e., cameras, lights, tools, movable incore detector thimbles, etc.) would also be considered core alterations.

The proposed revision to the definition of core alteration more explicitly defines those operations that have a potential for adding positive reactivity to the core and excluding from the definition the use of "non-reactive" components that would not significantly change core reactivity. Also,

the word “conservative” would be deleted from the second sentence of the definition because it is redundant. This change is consistent with the wording used in the definition of core alterations in NUREG-1431, Revision 1, “Improved Standard Technical Specifications for Westinghouse Plants.”

The proposed revision to the definition of core alterations will not affect Technical Specifications Section 3/4.9, “Refueling Operations”, requirements which ensure the core remains subcritical, nor will any Limiting Condition for Operation required during core alterations or the movement of fuel be changed. The purpose of the proposed change is to clarify and more explicitly define those activities that will be considered core alterations.

Based on the above discussions and the no significant hazards consideration determination presented in Attachment 3, it is appropriate to make the proposed change to the Specifications. Therefore, the proposed change does not adversely affect or endanger the health or safety of the public or involve a significant safety hazard.



# **ATTACHMENT 3**

## **DETERMINATION OF NO SIGNIFICANT HAZARDS CONSIDERATION**

## **DETERMINATION OF NO SIGNIFICANT HAZARDS CONSIDERATION**

In accordance with the criteria set forth in 10 CFR 50.92, the South Texas Project has evaluated these proposed Technical Specification changes and determined they do not represent a significant hazards consideration. The following is provided in support of this conclusion.

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

The proposed change does not involve an increase in the probability or consequences of an accident previously evaluated. The proposed change does not involve any physical changes to the facility. The change to the definition of core alterations is consistent with that used in NUREG-1431, Revision 1, "Improved Standard Technical Specifications for Westinghouse Plants." The proposed revision to the definition of core alterations will not affect the Technical Specifications Section 3/4.9, "Refueling Operations", requirements which ensure the core remains subcritical, nor will any Limiting Condition for Operation required during core alterations or the movement of fuel be changed. The proposed change will not affect any safety margin or safety limit applicable to the facility. Therefore, the proposed change does not involve an increase in the probability or consequences of any accident previously evaluated.

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

The proposed change does not affect any previously evaluated accident scenario, nor does it create any new accident scenarios. The proposed change is a clarifying revision to the definition of core alterations only, and will not alter any of the currently approved refueling operation activities, nor will it create any new refueling operation activities.

Since the proposed change does not impact operation of the facility as presently approved, no possibility exists for a new or different kind of accident from those previously evaluated.

- 3. Does this change involve a significant reduction in a margin of safety?**

South Texas Project Technical Specifications 3/4.9.1, "Boron Concentration", ensures that the reactor will remain subcritical ( $K_{\text{eff}} \leq 0.95$ ) during core alterations and that uniform boron concentration is maintained for reactivity control in the water volume having direct access with the reactor vessel. The proposed change in the definition of core alterations will allow "non-reactive" components, such as cameras, lights, tools, movable incore detector thimbles, etc., to be moved or manipulated in the vessel, with fuel in the vessel and the vessel head removed, without constituting a core alteration. This is acceptable because these types of components will have negligible effect on core

reactivity, and will not affect reactor coolant system boron concentration. Therefore, operations using these types of components will not adversely affect  $K_{eff}$  or the shutdown margin. Additionally, reactor subcriticality status is continuously monitored in the control room during Operating Mode 6, as specified in Specification 3/4.9.2, "Instrumentation". Thus, there will be no reduction in a margin of safety resulting from the proposed change.

Based on the above, the South Texas Project has evaluated the proposed Technical Specification change and determined it does not represent a significant hazards consideration.

# **ATTACHMENT 4**

## **ENVIRONMENTAL ASSESSMENT**

## **ENVIRONMENTAL ASSESSMENT**

This proposed Technical Specification Change has been evaluated against the criteria for and identification of licensing and regulatory actions requiring environmental assessment in accordance with 10 CFR 51.21. It has been determined that the proposed changes meet the criteria for categorical exclusion as provided for under 10 CFR 51.22(c)(9). The following is a discussion of how the proposed Technical Specification Change meets the criteria for categorical exclusion.

10 CFR 51.22 (c) (9): Although the proposed change involves changes to requirements with respect to inspection or surveillance requirements;

- (i) the proposed change involves no Significant Hazards Consideration (refer to the No Significant Hazards Consideration section of this Technical Specification Change Request),
- (ii) there is no significant change in the types or significant increase in the amounts of any effluents that may be released offsite since the proposed changes do not affect the generation of any radioactive effluents nor do they affect any of the permitted release paths, and
- (iii) there is no significant increase in individual or cumulative occupational radiation exposure.

Accordingly, the proposed change meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22 (c)(9). Based on the aforementioned and pursuant to 10 CFR 51.22 (b), no environmental assessment or environmental impact statement need be prepared in connection with issuance of an amendment to the Technical Specifications incorporating the proposed changes of this request.

# **ATTACHMENT 5**

## **TECHNICAL SPECIFICATION MARKED-UP PAGES**

**PROPOSED CHANGES TO TECHNICAL SPECIFICATIONS**

The Technical Specifications page listed below is marked-up to identify the proposed changes associated with this submittal and is enclosed in this attachment.

Page:

1-2

DEFINITIONS

CONTAINMENT INTEGRITY

1.7 CONTAINMENT INTEGRITY shall exist when:

- a. All penetrations required to be closed during accident conditions are either:
  - 1) Capable of being closed by an OPERABLE containment automatic isolation valve system, or
  - 2) Closed by manual valves, blind flanges, or deactivated automatic valves secured in their closed positions, except as provided in Specification 3.6.3.
- b. All equipment hatches are closed and sealed,
- c. Each air lock is in compliance with the requirements of Specification 3.6.1.3,
- d. The containment leakage rates are within the limits of Specification 3.6.1.2, and
- e. The sealing mechanism associated with each penetration (e.g., welds, bellows, or O-rings) is OPERABLE.

CONTROLLED LEAKAGE

1.8 CONTROLLED LEAKAGE shall be that seal water flow supplied to the reactor coolant pump seals.

CORE ALTERATIONS

INSERT 1

1.9 CORE ALTERATIONS shall be the movement or manipulation of any component within the reactor pressure vessel with the vessel head removed and fuel in the vessel. Suspension of CORE ALTERATION shall not preclude completion of movement of a component to a safe conservative position.

CORE OPERATING LIMITS REPORT

1.9a The CORE OPERATING LIMITS REPORT is the unit-specific document that provides core operating limits for the current operating reload cycle. These cycle-specific core operating limits shall be determined for each reload cycle in accordance with Specification 6.9.1.6. Plant operation within these core operating limits is addressed within the individual Specifications.

DIGITAL CHANNEL OPERATIONAL TEST

1.10 A DIGITAL CHANNEL OPERATIONAL TEST shall consist of injecting simulated process data where available or exercising the digital computer hardware using data base manipulation to verify OPERABILITY of alarm, interlock, and/or trip functions.

DOSE EQUIVALENT I-131

1.11 DOSE EQUIVALENT I-131 shall be that concentration of I-131 (microCurie/gram) which alone would produce the same thyroid dose as the quantity and isotopic mixture of I-131, I-132, I-133, I-134, and I-135 actually present. The thyroid dose conversion factors used for this calculation shall be those listed in Table E-7 of NRC Regulatory Guide 1.109, Revision 1, October 1977.



**Proposed Insert to Technical Specifications Page 1-2**

*Insert 1*

**1.9 CORE ALTERATIONS shall be the movement of any fuel, sources, or reactivity control components within the reactor vessel with the vessel head removed and fuel in the vessel. Suspension of CORE ALTERATIONS shall not preclude completion of movement of a component to a safe position.**

# **ATTACHMENT 6**

**TECHNICAL SPECIFICATIONS PAGES  
WITH  
PROPOSED CHANGES  
INCORPORATED**

**TECHNICAL SPECIFICATIONS PAGES WITH PROPOSED CHANGES**  
**INCORPORATED**

The attached Technical Specifications page, which incorporates the proposed changes in Attachment 5, is provided for NRC use in review of this submittal.

Page:

1-2

## DEFINITIONS

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